Manitoba Water Stewardship

Gestion des resources hydriques Manitoba

Annual Report 2010-2011

Rapport annuel 2010-2011

Manitoba

MINISTER OF WATER STEWARDSHIP

Legislative Building
Winnipeg, Manitoba,
CANADA R3C 0V8

His Honour The Honourable Philip S. Lee, C.M., O.M.
Lieutenant-Governor of Manitoba
Room 235
Legislative Building
Winnipeg MB R3C 0V8

Your Honour:

I am pleased to present the Annual Report of Manitoba Water Stewardship for the fiscal year ending March 31, 2011.

Manitoba Water Stewardship is committed to protecting the health of Manitoba's aquatic ecosystems, including fisheries, wetlands, streams, rivers, lakes, and aquifers. We are responsible for providing safe drinking water, managing water-related risks such as floods and droughts for the security of Manitobans, regulating water supply, and engaging partners and the public in helping to protect and manage our valuable water. We are privileged to have an abundance of high quality water in Manitoba to support our environment, our economy and our society.

The attached Annual Report profiles the department's many accomplishments and activities over the past fiscal year in fulfilling our critical role of sustainably managing Manitoba's water for present and future generations.

Respectfully Submitted,

"Original signed by"

Christine Melnick
Minister of Water Stewardship

Manitoba

Deputy Minister of
Water Stewardship

Legislative Building
Winnipeg, Manitoba
Canada
R3C 0V8

The Honourable Christine Melnick
Minister of Water Stewardship
Room 314, Legislative Building
Winnipeg MB R3C 0V8

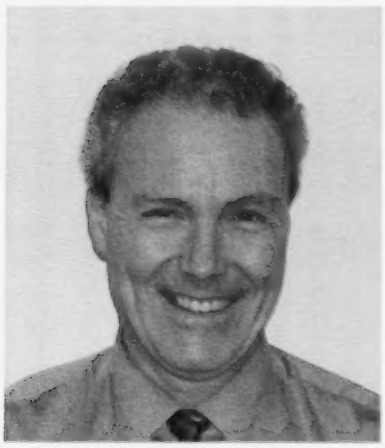
Dear Minister:

I am pleased to provide the Annual Report of Manitoba Water Stewardship for the fiscal year ending March 31, 2011.

The report profiles the many accomplishments of the department related to flood protection, forecasting, mitigation, the protection of water quality including restoring the health of Lake Winnipeg and its watershed, protection of drinking water for Manitobans, sustainably managing the province's fisheries resources, restoring wetlands, sustainably allocating and regulating the use of Manitoba's water including the drainage of excess precipitation, and partnering with conservation districts to develop and implement integrated watershed management plans across the province.

Details on all programs, their objectives and key results are reported along with statistical information related to key activities and performance measures. The excellent work of departmental staff is evident in the broad range of successful programs and achievements documented in this report.

Respectfully submitted,



"Original signed by"

Don Norquay
Deputy Minister

Contents

LIST OF TABLES 2
HIGHLIGHTS 5
FAITS SAILLANTS 8
Minister's Salary 12
Executive Support 12
Human Resource Management 13
Administration and Finance 14
Financial Services 15
Information Technology Services 16
ECOLOGICAL SERVICES 17
Administration 17
Planning and Coordination Branch 18
Water Science and Management - Administration 23
Water Science and Management - Groundwater Management 25
Water Science and Management - Surface Water Management 27
Water Science and Management - Water Quality Management 30
Fisheries Branch - Administration 33
Fisheries Branch - Fish Hatchery and Fish Culture 34
Fisheries Branch – Sport and Commercial Fishing Management 36
Fisheries Branch – Regional Fisheries Resources 37
Northern Fishermen's Freight Assistance 40
Fisheries Branch – Fisheries Enhancement Fund 41
Conservation District and Watershed Assistance 51
REGULATORY AND OPERATIONAL SERVICES DIVISION 53
Administration 53
Regulatory and Operational Services Division - Flood Forecasting and Flood Response Coordination Branch 54
Regulatory and Operational Services - Water Control Systems Management 56
Regulatory and Operational Services - Office of Drinking Water 58
Regulatory and Operational Services – Water Control Works and Drainage Licensing 60
Regulatory and Operational Services - Water Use Licensing 61
WATER STEWARDSHIP INITIATIVES 63
Costs Related to Capital Assets 65
PART B – CAPITAL INVESTMENT 66
Sustainable Development Activities and Accomplishments 67
REVENUE and EXPENDITURE SUMMARIES 74
Reconciliation Statement 74
FIVE YEAR EXPENDITURE AND STAFFING SUMMARY BY MAIN APPROPRIATION 79
MANITOBA WATER STEWARDSHIP – Performance Reporting Table 80
The Public Interest Disclosure (Whistleblower Protection) Act 89

LIST OF TABLES

AF.1 Expenditure, Minister's Salary 12
AF.2 Expenditure, Executive Support 12
AF.3 Expenditure, Administration & Finance 14
AF.4 Expenditure, Information Technology Services 16

EC.1 Expenditure, Ecological Services, Administration 17
EC.2 Expenditure, Planning and Coordination 22
EC.3 Expenditure, Water Science and Management Branch, Administration 24
EC.4 Expenditure, Groundwater Management 26
EC.5 Expenditure, Surface Water Management 29
EC.6 Expenditure, Water Quality Management 32

FI.1 Expenditure, Fisheries Branch, Administration 34
FI.2 Distribution of Fish Stocked from Fish Hatcheries 35
FI.3 Distribution of Sturgeon and Walleye from Stakeholder Groups 35
FI.4 Total Distribution by Species 35
FI.5 Expenditure, Fish Hatchery and Fish Culture 36
FI.6 Expenditure, Sport and Commercial Fishing Management 37
FI.7 Expenditure, Regional Fisheries Resources 39
FI.8 Expenditure, Northern Fishermen's Freight Assistance 40
FI.9 Expenditure, Fisheries Enhancement Fund 41
FI.10 Licensed Fishers Employed in Manitoba Commercial Fishery, 2009/10 42
FI.11 Commercial Fishing Production (round Kg), Total Value and Employment (Licensed Fishers) 2000/01 to 2009/10 43
FI.12 Commercial Fishing Production (round weight kg) by Area and Total Value by Species, 2009/20 44
FI.13 Angling Licence Sales and Revenue 1997/98 to 2009/10 46
FI.14 Bait Fishing Industry Statistics 49
FI.15 Manitoba Fish Farming Statistics 50

CA.1 Expenditure, Conservation District and Watershed Assistance 52

RS.1 Expenditure, Regulatory and Operational Services, Administration 53
RS.2 Expenditure, Flood Forecasting and Flood Response Coordination 55
RS.3 Expenditure, Water Control System Mgmt 57
RS.4 Expenditure, Office of Drinking Water 60
RS.5 Expenditure, Water Control Works and Drainage Licensing 61
RS.6 Expenditure, Water Use Licensing 62

WS.1 Expenditure, Water Stewardship Initiatives 64

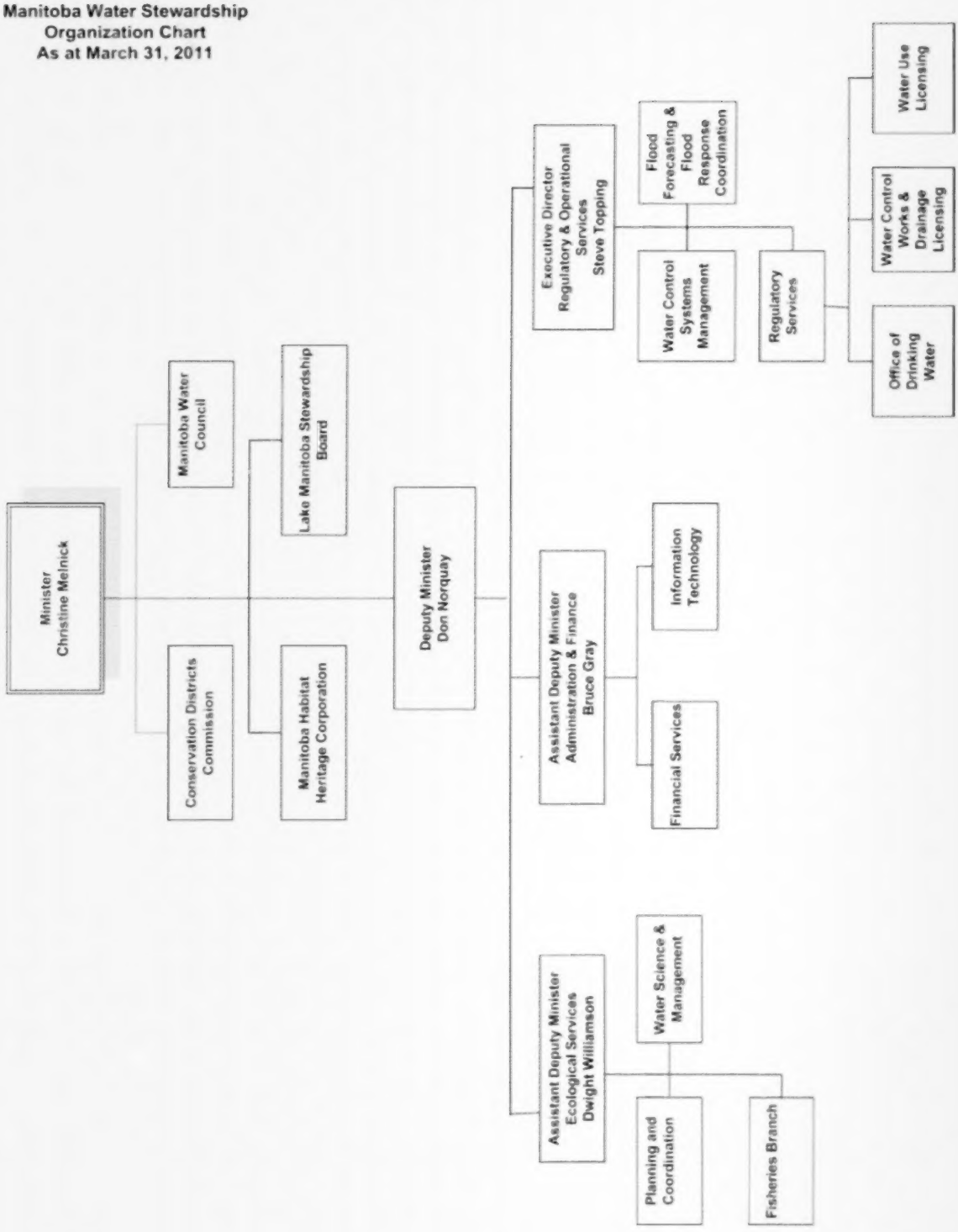
CI.1 Expenditure, General Assets 65
CI.2 Expenditure, B.25 General Assets 66

RE.1 Reconciliation Statement 74
RE.2 Revenue Summary by Source 75
RE.3 Expenditure Summary 76
RE.4 Five-Year Expenditure and Staffing Summary by Appropriation 79

LIST OF FIGURES

Organization Chart 3

Manitoba Water Stewardship
Organization Chart
As at March 31, 2011



HIGHLIGHTS

Ecological Services Division

- Provided watershed planning and support services to conservation districts and water planning authorities to assist with the development of integrated watershed management plans. Seven integrated watershed management plans were completed this year, bringing the total plans completed to date to ten, with fourteen more plans in various stages of development.
- Coordinated the delivery of the third year of the Wetland Restoration Incentive Program with Manitoba Habitat Heritage Corporation and Ducks Unlimited Canada. To date, this program has restored 956 acres of wetlands, sequestering 3,720 tonnes of carbon dioxide equivalents per year, a function which will continue for the next 40 years.
- Worked with other provinces and territories on a national water information sharing initiative – an initiative with focus on providing public access to existing Canadian online resources containing data and information on water (Canada's Water InfoStream).
- Provided $300,000 in funding for the restoration of two of Manitoba's large lake marshes, Delta Marsh on Lake Manitoba and Netley-Libau Marsh on Lake Winnipeg.
- Continued the development of the WaterSmart initiative – a conservation and efficiency initiative to reduce consumption of water by Manitobans. This included continued funding for the replacement of 13 L toilets with 6 L low flush toilets under the Low Income Residential Efficiency Program as well as continued education and public outreach.
- As a component of Natural Resources Canada's Prairie Regional Adaptation Collaborative Water Theme, the department worked with Friends of the Earth Canada to host workshops in Manitoba aimed at educating provincial staff of the 'Water Soft Path' techniques of water conservation. This approach encourages water conservation as a means of reducing water demand. Overall, the project will enhance decision-markers' adaptability to climate change.
- Completion of the Conservation District Framework for the Future consensus document articulating a shared vision strategies and priorities for the Conservation Districts Program.
- Senior and regional watershed planners provided planning and support services to assist conservation districts develop 17 integrated watershed management plans..
- Groundwater mapping was undertaken in several parts of the province to support integrated watershed or aquifer management plans. Updates on aquifer conditions were provided for the Oak Lake and Winkler aquifers as part of continued input to these plans.
- Detailed field, office, and modelling work continued in south eastern Manitoba to improve our understanding of groundwater conditions in this area. The information will improve the digital groundwater model that will be used for sustainability evaluations.
- Staff have started work on a draft conceptual Drought management Plan and Strategy for the province. This work includes the collection of background information and the selection of drought indicators.
- In collaboration with the Canada Centre for Remote Sensing, cores were extracted from the Red River ice cover to "ground-truth" RADARSAT-2 imagery. Ice type-maps were successfully produced and were used by the Ice Jam Mitigation Program to guide ice surveys. Due to high flows in the Red River, ice cover during winter 2010 – 2011 consisted mainly of consolidated ice formed by frazil ice. Structural and thermal properties of the ice were studied to complement ice jam mitigation efforts.
- A public review of the Red River Floodway rules of operation was undertaken and a report was provided to Manitoba Conservation's Environmental Assessment and Licensing Branch on November 1, 2010. The report contains a number of next steps with respect to ice jams, communications, transportation impacts, and compensation.

- Work progressed to compile, analyze, and assess comprehensive water chemistry, biological and physical data for the Lake Winnipeg State of the Lake Report co-authored by Manitoba Water Stewardship and Environment Canada.
- *The Phosphorus Reduction Act* was proclaimed prohibiting the distribution and sale of cleaning products containing phosphorus. Through the work of the Department with manufactures, retailers, and distributors, the availability of automatic dishwashing detergents with less than 0.5 % phosphorus was increased across the province.
- A Memorandum of Understanding between Canada and Manitoba was signed to further the cooperation and coordination of efforts in understanding and protecting Lake Winnipeg. A Steering Committee was formed under the Memorandum of Understanding.
- Staff increased efforts to heighten public education on the prevention of accidental introduction of aquatic invasive species, including zebra mussels,
- Developed a draft framework for the Lake Manitoba Fisheries Management Plan directed at ensuring the long-term sustainability of the fishery for all users. A public engagement process was initiated to seek input from all users around the lake interested in sharing their ideas on future management of the fishery.
- Staff continued discussion with fisher representatives from communities around Lake Winnipeg to establish a new Lake Winnipeg Fishery Resource Management Board. The intent of this lake-wide board is to provide fishers greater participation and input into fisheries management decisions.
- The first year of a long-term monitoring program for rusty crayfish populations in Falcon Lake was completed. This program monitors the only known population of this invasive species currently in Manitoba, and information gathered through the program will be critical to controlling its spread.
- The Grand Rapids and Whiteshell fish hatcheries underwent extensive audits for biosecurity / health status through Canadian Food Inspection Agency's Compartmentalization Program to improve ability for provincial hatcheries to import salmonids (trout) into Manitoba, **and** facilitate the distribution of cultured and wild fish throughout the province.
- The *Lake Winnipeg Quota Review Task Force* completed its review of the Lake Winnipeg commercial fishery and provided the Department with a report entitled Technical Assessment of the Status, Health and Sustainable Harvest Levels of the Lake Winnipeg Fisheries Resource.
- Participated on the Saskatchewan River Sturgeon Management Board and managed the Manitoba portion of the sturgeon field program. A total of 154 sturgeon were tagged and released into the Saskatchewan River, along with 6 recaptures of previously tagged sturgeon.
- Participated on the Southern Indian Lake Environmental Monitoring Committee with representatives from First Nations, commercial fishers, and Manitoba Hydro to address environmental issues arising from hydroelectric development projects.
- Conducted Non-Lethal Sampling Protocols for assessing fisheries populations on accessible and developed lakes in select lakes in the Whiteshell and Nopiming Provincial Parks. The use of trap nets and electro-fishing methods play a major role in obtaining fish stock assessment data with minimal mortality. Equipment was procured with funding from the Fisheries Enhancement Fund.
- A research program on the Red River was initiated with the University of Nebraska (Lincoln) to study the population dynamics and ecology of channel catfish. A preliminary assessment of the proposed study site was conducted to determine what types of data collection are suitable for a multi-year study of the lower Red River.

- Continued to work with First Nations, Métis, and other resource users in the Dauphin Lake area to protect walleye recruitment while balancing the needs of those who rely on this valuable fishery. These steps will have a positive long-term impact on the sustainability of the Dauphin Lake walleye fishery.

Regulatory and Operational Services Division

- Issued spring flood outlooks as well as daily flood reports and forecasts for streams with high water conditions or flooding. These reports were widely distributed for use by all levels of government, emergency management and the public for both spring floods and summer rain generated events.
- Participated in flood fighting activities in the early spring of 2011, including ice jam monitoring and mitigation, coordination with local authorities, assisting with Red River Floodway operation and analyses, and coordination of various activities.
- Developed a comprehensive flood mitigation program, in concert with other departments. Began implementing the Individual Flood Protection Initiative for the protection of flood prone homes, farms, and businesses; the Community Flood Protection Program for the construction of community flood protection works such as dikes; and the Shellmouth Dam Enhancement Project to complete environmental and engineering assessments of the construction of gates on the dam's spillway.
- Oversaw the purchase of a second Provincial Amphibex ice breaker and an additional two radio-controlled Bobcat asphalt saws outfitted for use as ice cutters. Directed the ice breaking work of the provincially-owned Amphibexes, the ice cutters, and the Ground-Penetrating Radar ice thickness monitoring program in the early spring of 2011, with ice jam mitigation work on the north Red River, the Icelandic River at Riverton, the Brokenhead River, the Saskatchewan and Carrot rivers at The Pas, the Fisher River, and the Whitemud River, and at the Portage Diversion outlet.
- Installed real time hydrometric stations at Stephenfield Reservoir, Morden Reservoir, Pilot Mound Reservoir and Mary Jane Reservoir.
- Working under the authority of *The Water Rights Act*, staff of the Water Rights Licensing program processed applications requesting the allocation of surface water or groundwater for municipal, agricultural (i.e. livestock), industrial, irrigation and other purposes.
- Developed new requirements for surface and groundwater projects - all new projects require the issuance of either a Development Authorization for surface water projects or a Groundwater Exploration Permit for groundwater sourced projects in advance of project works proceeding to construction.
- Monitored drinking water quality for 462 public water systems and 294 semi-public water systems. Undertook 325 on-site inspections. Prepared 400 public water system report cards (annual audits). Issued 80 permits for construction or alteration of water systems. Reviewed 27 engineering assessments of water systems, 25 wastewater projects, seven watershed management plans, and 57 subdivision proposals and planning documents. Initiated processes for licensing of semi-public water systems and registering of non-potable systems.
- Made data on public water system compliance with up-coming water quality standards available to the general public through the department's website. Worked with the Department of Health to publish factsheets relating to standards for trihalomathanes, turbidity, protozoa (*Giardia* and *Cryptosporidium*), nitrates and trace elements, and to initiate a process for issuing water quality advisories relating to these standards.

FAITS SAILLANTS

Division des services écologiques

- Prestation de services de planification et de soutien aux districts de conservation et aux organismes de planification des eaux afin d'aider à l'élaboration de plans intégrés de gestion des bassins hydrographiques. Sept plans intégrés de gestion des bassins hydrographiques ont été élaborés cette année, ce qui porte à dix leur nombre total actuel. Quatorze autres plans sont en cours d'élaboration.

- Coordination du Programme d'encouragement à la restauration des milieux humides, qui en est à sa troisième année, en collaboration avec la Société protectrice du patrimoine écologique du Manitoba et Canards Illimités Canada. Ce programme a jusqu'à présent permis de restaurer 956 acres de terres humides qui capturent 3 720 tonnes d'équivalents dioxyde de carbone par an et qui continueront d'assurer cette fonction pendant les 40 prochaines années.

- Collaboration avec d'autres provinces et territoires sur une initiative d'échange d'information nationale, visant à permettre au public d'accéder à des ressources canadiennes en ligne existantes contenant des données et de l'information sur l'eau (l'Inforoute canadienne de l'eau).

- Affectation de 300 000 $ à la restauration de deux des grands lacs marécageux du Manitoba, à savoir le marais Delta, du lac Manitoba, et le marais Netley–Libau, du lac Winnipeg.

- Poursuite de l'initiative Écoleau Manitoba, qui vise l'efficacité énergétique et la conservation afin de réduire la quantité d'eau consommée par la population manitobaine. Cette initiative comprenait un financement continu pour le remplacement des toilettes à débit de 13 litres par des toilettes à faible débit de 6 litres dans le cadre du Programme d'efficacité énergétique pour les personnes à faible revenu, ainsi que la poursuite des activités d'éducation et de sensibilisation du public.

- En tant que composante du thème de l'eau de l'Initiative de collaboration pour l'adaptation régionale des Prairies, de Ressources naturelles Canada, le ministère a travaillé en collaboration avec Les Ami(e)s de la Terre Canada pour parrainer des ateliers au Manitoba ayant pour but d'informer les employés provinciaux des techniques de la « voie douce pour l'eau » (water soft path) pour la conservation de l'eau. Cette approche privilégie la conservation des ressources hydriques comme moyen de réduire la demande en eau. De façon générale, le projet améliorera la capacité d'adaptation des décideurs au changement climatique.

- Achèvement du document de consensus *Framework for the Future* du Programme des districts de conservation, qui offre une vision commune des stratégies et des priorités du programme.

- Des planificateurs de bassins hydrographiques principaux et régionaux ont fourni des services de planification et de soutien pour aider les districts de conservation à élaborer 17 plans intégrés de gestion des bassins hydrographiques.

- La cartographie des eaux souterraines a été entreprise dans plusieurs régions de la province dans le cadre de plans de gestion intégrés des bassins hydrographiques ou des aquifères. On a fourni des renseignements en matière d'aquifères pour les aquifères d'Oak Lake et de Winkler comme apport continu à l'élaboration de ces plans.

- Des travaux détaillés sur place et dans les bureaux, et visant l'élaboration de modèles, se sont poursuivis dans la région sud-est du Manitoba afin d'améliorer notre compréhension de l'état des eaux souterraines dans cette région. Cette information améliorera le modèle numérique des eaux souterraines qui sera utilisé pour les évaluations de durabilité.

- Le personnel a entamé l'ébauche conceptuelle d'un plan et d'une stratégie de gestion en matière de sécheresse pour la province. Ce travail inclut notamment la collecte de renseignements généraux et la sélection d'indicateurs de sécheresse.

- En collaboration avec le Centre canadien de télédétection, extraction de noyaux de glace à partir de la couverture de glace de la rivière Rouge afin de tester au sol les images de RADARSAT-2. Des cartes des types de glaces ont été produites et utilisées par le Programme de réduction des embâcles pour guider les relevés des glaces. En raison des forts débits de la rivière Rouge, la couverture de glace pendant l'hiver 2010-2011 était essentiellement constituée de glace de tassement formée de frasil. Les propriétés structurelles et thermiques de la glace ont été étudiées pour compléter les efforts de réduction des embâcles.

- Examen public des règles de fonctionnement du canal de dérivation de la rivière Rouge et rapport remis à la Direction des évaluations environnementales et des licences de Conservation Manitoba le 1er novembre 2010. Le rapport propose un certain nombre de mesures concernant les embâcles, les communications, les incidences sur le transport et l'indemnisation.

- Poursuite des travaux de collecte, d'analyse et d'évaluation des données globales hydrochimiques, biologiques et physiques en vue de la rédaction du rapport sur l'état du lac Winnipeg (Lake Winnipeg State of the Lake Report), réalisé conjointement par Gestion des ressources hydriques Manitoba et Environnement Canada.

- Proclamation de la *Loi sur la réduction du phosphore* qui interdit la distribution et la vente de produits de nettoyage contenant du phosphore. Le travail du ministère avec les fabricants, les détaillants et les distributeurs a permis d'accroître la disponibilité à l'échelle provinciale des détergents pour lave-vaisselle automatique contenant moins de 0,5 % de phosphore.

- Signature d'un protocole d'entente entre le Canada et le Manitoba visant à accroître la coopération et la coordination des efforts de connaissance et de protection du lac Winnipeg. Un comité directeur a été formé dans le cadre du protocole d'entente.

- Le personnel a redoublé d'efforts pour sensibiliser le public aux moyens d'éviter l'introduction accidentelle d'espèces aquatiques envahissantes, y compris la moule zébrée.

- Le ministère a réalisé l'ébauche d'un cadre de travail pour le plan de gestion des pêcheries du lac Manitoba, qui vise à assurer la durabilité à long terme de la pêche pour tous les usagers. Un processus de participation publique a été organisé pour connaître les propositions et les suggestions de tous les usagers souhaitant faire part de leurs idées sur la gestion future de la pêche.

  Le personnel a continué de consulter les représentants de la pêche des collectivités autour du lac Winnipeg en vue de créer un nouveau conseil de gestion des ressources de la pêche du lac Winnipeg. Ce conseil a pour mandat de faire en sorte que les pêcheurs participent davantage aux décisions relatives à la gestion de la pêche.

Achèvement de la première année du programme de surveillance à long terme des populations d'écrevisses américaines dans le lac Falcon. Ce programme surveille ces populations, les seules de cette espèce envahissante connues au Manitoba. Les données recueillies dans le cadre du programme sont cruciales pour lutter contre leur prolifération.

- Le programme de compartimentation de l'Agence canadienne d'inspection des aliments a effectué des vérifications approfondies des installations des écloseries de Grand Rapids et de Whiteshell pour les besoins du statut sanitaire et biosécuritaire de celles-ci. L'objectif est d'améliorer la capacité des écloseries provinciales à importer des salmonidés (truites) au Manitoba et de faciliter la distribution du poisson sauvage et d'élevage dans toute la province.

- Le Groupe de travail sur l'examen des quotas du lac Winnipeg a terminé son examen de la pêche commerciale sur le lac Winnipeg et a remis au ministère un rapport intitulé *Technical Assessment of the Status, Health and Sustainable Harvest Levels of the Lake Winnipeg Fisheries Resource* (évaluation technique de l'état, de la santé et des niveaux d'exploitation durable des ressources halieutiques du lac Winnipeg).

- Participation aux activités du Saskatchewan River Sturgeon Management Board et gestion du volet manitobain du programme sur le terrain consacré à l'esturgeon. Un total de 154 esturgeons ont été marqués et relâchés dans la rivière Saskatchewan, et on en a recapturé six qui avaient été marqués précédemment.

- Participation aux activités du Comité de surveillance environnementale du lac Southern Indian, en compagnie de représentants des Premières nations, des pêcheurs commerciaux et de Manitoba Hydro, afin de traiter des questions environnementales qui découlent des projets d'aménagement hydroélectrique.

- Évaluation des populations de poissons dans certains lacs accessibles et aménagés des parcs provinciaux Whiteshell et Nopiming, au moyen de protocoles d'échantillonnage non létaux. L'utilisation de trappes en filet et de méthodes de pêche à l'électricité joue un rôle majeur pour obtenir des données d'évaluation des stocks de poissons avec une mortalité très peu élevée. Le matériel a été acheté grâce à un financement du Fonds de mise en valeur de la pêche.

- Lancement, en collaboration avec l'université du Nebraska (Lincoln), d'un programme de recherche sur la rivière Rouge pour étudier la dynamique des populations et l'écologie des barbues de rivière. On a effectué une évaluation préliminaire du site proposé pour l'étude afin de déterminer quels types de collectes de données sont appropriés pour une étude pluriannuelle du cours inférieur de la rivière Rouge.

- Poursuite du travail avec les Premières nations, les Métis et d'autres utilisateurs de ressources dans la région du lac Dauphin pour protéger le recrutement de doré jaune tout en tenant compte des besoins de ceux qui comptent sur cette pêche de grande valeur. Ces mesures auront des effets positifs à long terme sur la durabilité de la pêche au doré jaune dans le lac Dauphin.

Division des services de la réglementation et des opérations

- La Division a fourni des prévisions sur les inondations printanières ainsi que des prévisions et des rapports quotidiens sur les cours d'eaux en crue ou ayant des niveaux d'eau élevés. Ces rapports ont été largement diffusés en vue de leur utilisation par tous les ordres de gouvernement, les services de gestion des urgences et le public au moment des crues printanières et des épisodes de pluie au cours de l'été.

- La Division a participé aux activités de lutte contre les inondations au début du printemps 2011, notamment : surveillance et atténuation des embâcles, coordination en collaboration avec les autorités locales, services de soutien et d'analyse pour le fonctionnement du canal de dérivation de la rivière Rouge et coordination de diverses activités.

- Élaboration d'un programme complet d'atténuation des inondations, en collaboration avec d'autres ministères. Début de la mise en œuvre de l'Initiative pour la protection des particuliers contre les inondations, qui vise à protéger les maisons, les fermes et les entreprises vulnérables aux inondations; du Programme de protection des collectivités contre les inondations, qui finance la construction d'ouvrages de protection des collectivités tels que des digues; et du projet d'amélioration du barrage de Shellmouth, afin de terminer les évaluations environnementales et techniques concernant la construction de vannes sur le déversoir du barrage.

- Supervision de l'achat, pour la Province, d'une deuxième broyeuse de glace Amphibex et de deux autres scies à asphalte radio-commandées Bobcat, aménagées pour couper la glace. Direction des travaux de broyage de glace à l'aide des machines Amphibex appartenant à la Province, des machines à couper la glace et du Programme de surveillance de l'épaisseur de la glace par géoradar, au début du printemps 2011. Travaux d'atténuation des embâcles sur la partie nord de la rivière Rouge, la rivière Icelandic à Riverton, la rivière Brokenhead, la rivière Saskatchewan et la

rivière Carrot au Pas, la rivière Fisher, la rivière Whitemud, et à la sortie du canal de dérivation Portage.

- Installation de stations hydrométriques en temps réel au réservoir Mary Jane et aux réservoirs de Stephenfield, de Morden et de Pilot Mound.

- Travaillant sous l'autorité de la *Loi sur les droits d'utilisation de l'eau*, le personnel du programme de délivrance des licences d'utilisation de l'eau a traité des demandes d'allocation d'eaux de surface ou souterraines à des fins municipales, agricoles (c.-à-d., bétail) et industrielles, et pour les besoins d'irrigation ou autres.

- La Division a établi de nouvelles exigences pour les projets d'eaux de surface et souterraines. Tout nouveau projet nécessite la délivrance soit d'une autorisation de développement, pour les projets concernant l'eau de surface, soit d'un permis d'exploration des eaux souterraines, pour les projets portant sur les eaux souterraines, et ce, avant le déroulement des travaux de construction.

- Surveillance de la qualité de l'eau potable de 462 réseaux publics d'alimentation en eau et de 294 réseaux semi-publics d'alimentation en eau. Conduite de 325 inspections de site. Préparation de 400 fiches de rendement de réseaux publics d'alimentation en eau (vérifications annuelles). Délivrance de 80 permis de construction ou de modification de réseaux d'alimentation en eau. Examen de 27 évaluations techniques de réseaux d'alimentation en eau, de 25 projets de traitement des eaux usées, de sept plans de gestion de bassins hydrographiques et de 57 propositions de lotissement et documents d'aménagement. Lancement de processus de délivrance des licences d'exploitation des réseaux semi-publics d'alimentation en eau et d'enregistrement des réseaux d'eau non potable.

- Communication au grand public, sur le site Web du ministère, des données sur l'observation des normes de qualité de l'eau potable à venir dans les réseaux publics d'alimentation en eau. Publication en collaboration avec le ministère de la Santé de feuilles de renseignements concernant les normes pour les trihalométhanes, la turbidité, les protozoaires (*Giardia lamblia* et *Cryptosporidium parvum*), les nitrates et les oligo-éléments, et lancement d'un processus pour la publication d'avis concernant la qualité de l'eau relatifs à ces normes.

Minister's Salary

The Minister's salary provides the Minister with additional compensation to which an individual appointed to Executive Council is entitled.

Table AF.1
25.1(a) Minister's Salary

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	37	1.00	37	0	
Total Sub-Appropriation	37	1.00	37	0	

Executive Support

This area is comprised of support staff in the offices of the Minister and Deputy Minister of Water Stewardship.

The purpose of Executive Support is to develop, implement and oversee policies and programs that are designed to attain, over the long term, the goals set out in the Department's vision and mission statements; to advise the Minister on matters relating to the Department; to provide policy direction for departmental programs; to coordinate departmental communications, activities, and initiatives; and to provide administrative support for the Offices of the Minister and Deputy Minister.

Table AF.2
25.1(b) Executive Support

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	531	8.00	532	(1)	
Other Expenditures	141		167	(26)	1
Total Sub-Appropriation	672	8.00	699	(27)	

1. Under expenditure is due to reduced general operating costs, including media monitoring, telecommunications, printing, desktop, membership fees and accommodation costs.

Human Resource Management

Effective March 1, 2010 the Government of Manitoba realigned responsibility for the delivery of human resource services and the associated staff to the Civil Service Commission, with the goal to improve service delivery to all departments and employees. For additional information on this realignment, see the **Civil Service Commission's 2010/11 Annual Report**.

Administration and Finance

Corporate Services Division provides shared services for the departments of Conservation and Water Stewardship, including: administrative; financial; safety, health and risk management; equipment warehousing; library and public information services; and information technology services.

Administrative services includes fleet vehicle coordination, office accommodation and parking administration, environmental impact file searches, records management, coordination of departmental French language services, and compliance with *The Freedom of Information and Protection of Privacy Act*.

The Conservation and Environment Library supports access to print and electronic specialized information resources for Manitoba Conservation, Manitoba Water Stewardship, Environment Canada in Winnipeg, the Canadian Council of Ministers of the Environment, and the public. Interlibrary loans are coordinated with other Libraries and Educational Institutions. Current information related to the mandates of each partner organization is made available to staff and to the public.

The departmental warehouse is the equipment/supply storage and mobilization point for branches and the Fire Operations Centre. In emergencies, such as fire and flood, the warehouse becomes the logistical support base for all equipment.

Key Results Achieved:

In the 2010 calendar year, 71 requests for information were processed under *The Freedom of Information and Protection of Privacy Act*.

In the 2010/11 year, the library responded to over 4,000 requests for information both from staff and the public, and over 400 items were added to the physical collection.

The Department continues to look for opportunities to implement the French Language Services policy in keeping with the *Chartier Report* on French Language Services. A significant portion of the translation allocation was utilized in 2010/11 for the translation of web content. The Department also continued its participation in the Bilingual Service Centres.

Table AF.3
25.1(c) Administration and Finance

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	304	5.00	317	(13)	
Other Expenditures	27		30	(3)	
Total Sub-Appropriation	331	5.00	347	(16)	

Financial Services

The Financial Services Branch develops, communicates, monitors and evaluates departmental financial policies, systems, processes and procedures to ensure the effective, efficient and economical operation of departmental financial functions in compliance with requirements of the Department, Treasury Board, the Department of Finance and the Office of the Auditor General.

Key Results Achieved:

The Branch provided financial support and leadership to all branches, regions, and business units of the departments of Conservation and Water Stewardship, including:

- timely completion of estimates information, detailed budget, forecast and other financial reports;
- adherence to departmental and Government policy and procedures related to financial operations;
- provision of quality financial information to departmental managers to enable proper management of programs;
- prompt and accurate payment of accounts payable;
- collection and deposit of all revenues and receipts to which the Department was entitled;
- capital asset financial planning and management;
- advice, guidance and administration related to contracts and grants;
- overall comptrollership support; and
- timely and convenient sale of angling licences to the public.

The Licensing Section managed a province-wide network of 719 private and 137 departmental licence vendors through which convenient access was provided to the public for angling, hunting, migratory waterfowl, trapping, fur dealer, park vehicle entry, camping, arborist and various other licences, permits and related information (e.g., Angler's Guide, Hunting Guide, Trapper's Guide). For the period of April 1, 2010 to March 31, 2011, the Licensing Section recorded 549,596 transactions with net revenue of $11,600,318.60. Vendor activity for the same period included 31 new appointments, 103 discontinuances, 8 suspensions, and 15 reinstatements. A total of 664 private vendors are located in rural areas.

The Public Information section provided information to the public regarding the numerous programs delivered by the Departments of Conservation and Water Stewardship. This service was provided in person, by telephone, internet and mail, including the following responses to requests for information and assistance in 2010/11:

- 33,318 direct telephone requests to the Information Officers;
- 33,309 calls were received by the automated Public Information line, of which 9,597 were handled directly by the line;
- 74,298 in person requests;
- 878 requests through the Internet; and
- 5,298 information packages were mailed.

The Revenue Management section managed the collection, security, deposit and reporting of revenue for over 50 revenue streams for the Departments of Conservation and Water Stewardship. The section provided assistance with the delivery of various programs including the Seasonal Camping Draw and the Parks Reservation Service. The section's Winnipeg Cashier's Office handled 5,963 direct sales totaling $2,496,520 and processed over 13,200 mailed remittances from customers and departmental field offices totaling $ 34,232,635. Credit cards were accepted at 45 locations, of which 39 also accepted debit cards.

Information Technology Services

The Information Technology Branch designs, implements and manages internal information technology services and provides expertise, including technology and business consulting, systems analysis, design, implementation, corporate database management, and development and management of a yearly department-wide information technology systems plan. Related services include business process redesign, new systems analysis, business case development, strategic and operational planning, management of contractors, and management of desktop deployment and refresh.

Key Results Achieved:

- The **Information Technology** Branch assisted with development of business requirements and project initiation for the implementation of new software tools for the gathering and management of hydrological data retrieval and management of surface water data to support various water management activities including flood forecasting.
- Business requirements and analysis work was completed along with the development of project charters for the replacement of the current water licensing system and also for the groundwater drilling application.
- The Branch provided logistical and project management support for the department's desktop technology refresh project and assisted with the transition to new versions of the government's standard office desktop support software.

Table AF.4
25.1(d) Information Technology Services

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	278	1.00	349	(71)	1
Other Expenditures	16		15	1	
Total Sub-Appropriation	294	1.00	364	(70)	

1. Under expenditure is due to vacancy.

ECOLOGICAL SERVICES

Administration

The office of the Assistant Deputy Minister provides the necessary program and policy direction and coordination for the Ecological Services Division to ensure the sustainable management, allocation, and conservation of water and fisheries by developing new policy direction including legislation and regulation, and ensuring existing policies and procedures are followed. The office oversees funding, negotiates and administers grants and contracts, monitors efficiency and effectiveness of expenditures, and guides provincial input into transboundary water management issues. In addition, the Assistant Deputy Minister sits on the following boards, councils, and commissions:

- International Joint Commission's International Red River Board
- International Joint Commission's International Souris River Board
- Red River Basin Commission
- Canada - Manitoba Lake Winnipeg Memorandum of Understanding Steering Committee
- Canada - Manitoba Fisheries Agreement Committee
- Board of Directors, Lake Winnipeg Research Consortium Inc.
- Alternate Member, Prairie Provinces Water Board
- Working Group on Canadian Recreational Water Quality Guidelines
- Western Water Stewardship Council
- Netley/Libau and Delta Marsh Restoration Working Group

Table EC.1
25.2(c).1 Administration

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	173	3.00	209	(36)	1
Other Expenditures	135		142	(7)	
Total Sub-Appropriation	308	3.00	351	(43)	

1. Under expenditure is due to vacancy.

Planning and Coordination Branch

Administration

The Planning and Coordination Branch is comprised of the Watershed Planning and Programs section, the Information and Knowledge Management section, and the Policy and Legislation section. The Branch leads, directs and coordinates:

- the strategic planning process of Manitoba Water Stewardship;
- the development of provincial water policy and legislation;
- the provision of advice and secretariat support to the Manitoba Water Council;
- the implementation of the watershed planning provisions of *The Water Protection Act*;
- the provision of advice and support to Conservation Districts Boards to enable the effective delivery of its mandate to deliver conservation-based soil and water programs within local communities;
- the review and coordination of departmental responses to ensure consistency with legislative requirements and approved watershed plans for all government statutory licensing, transactions, appeals, development proposals and special projects;
- the implementation of business processes that streamline the collection, organization and dissemination of knowledge and information;
- the use of spatial and non-spatial data and services in support of information and knowledge management and decision making activity; and
- website development, development of web services, and active management of website function and content in support of an effective and efficient information network and knowledge distribution methodology.

The Branch represents the department on numerous inter-departmental, provincial, national, and international agencies, boards and committees across the following theme areas:

- Inter governmental relations
- Climate change
- Ecological goods and services
- Wetlands
- Water conservation and efficiency
- Security and sustainability
- Conservation Agreements
- Land use and watershed planning

Information and Knowledge Management

This Section establishes and manages cross-cutting departmental work teams to provide leadership, innovation, coordination and integration of the department's information and knowledge systems. Activities include coordination and facilitation services to identify information and knowledge gaps and appropriate solutions. Leadership to facilitate integrated departmental solutions is provided to ensure the accurate and timely collection and dissemination of information and knowledge of a scientific, technical, and policy nature to support the department. This Section also provides leadership and coordinates the department's activities related to geographic information system science, internet/intranet, capacity building and education.

Key Results Achieved:

- Continued work with Natural Resources Canada in the production of a geospatial hydrography data model and vector topographic dataset – a dataset that synthesizes key concepts of hydrography and hydrology and provides a quality geometric description of Manitoba surface water systems.
- Provided spatial analysis expertise to numerous projects from across the department.

- Helped to identify business opportunities for a government-wide initiative for the application of GIS, including the potential benefits that would accrue from its use in departmental business areas and provided recommendation on government direction with respect to sharing of geographic and spatially linked business data, data management, standards and integration capabilities.
- Worked with other provinces and territories on a national scope water information sharing initiative – an initiative with focus on providing public access to existing Canadian online resources containing data and information on water (Canada's Water InfoStream).
- Expanded on previously generated opportunities for departmental collaboration, productivity, and distributed decision making through SharePoint and by continued support to the departmental intranet site.
- Developed new website material and reporting mechanisms for flood forecasting and integrated watershed management planning.
- Provided leadership and improved coordination of information on the department's internet site.
- Continued work on a network drive reconfiguration project – a project that will help to standardize departmental electronic storage. New file classification mechanisms and changes to existing network structure will afford the department a new level of storage capability with enhanced file retrieval features.
- Provided a point of contact for: departmental clients' computer-related service requests; diagnosing, resolving and referring computer-related issues; computer product information and delivery; specialized technology implementations; and computer-related training and support.

Policy and Legislation

This Section is responsible for: coordinating the review, development and amendment of legislation, regulations and policy required to support sustainable management of Manitoba's waters; major department wide strategy documents; the departmental strategic planning process; the Ministerial House Book; and responses to public inquiries received through written correspondence, website and phone.

The Policy and Legislation Section is also responsible for developing climate change mitigation and adaptation strategies within the department and across government when they pertain to water, as well as *WaterSmart* Manitoba, a water conservation and efficiency initiative for all Manitobans.

Secretariat and policy support is provided by the section to the Manitoba Water Council, the Conservation Agreements Board, and an aquifer management advisory board. The Section participates in large basin planning activities, administers the Water Stewardship Fund, coordinates the department's technical review of Environment Canada Lake Winnipeg Basin Stewardship Fund project proposals and coordinates the department's review of statutory licences and development related proposals and projects.

Briefing materials are developed and policy support is provided for the department on water issues for the Federal/Provincial Relations Branch and other information requests of a national or international nature. This section also provides representation for the department on intergovernmental bodies and external agencies, boards and committees.

Key Results Achieved:

- Continued to coordinate the working group focusing on the restoration of two of Manitoba's large lake marshes, Delta Marsh on Lake Manitoba and Netley-Libau Marsh on Lake Winnipeg.
- Participated in the establishment of the National Water Stewardship Council, comprised of Deputy Ministers from all provinces and territories, which functions as the formal body to facilitate collaborative approaches to water, and reports to the Council of the Federations.
- Continued to support the *WaterSmart* water conservation and efficiency initiative to reduce consumption of water by Manitobans. Partnerships were continued with Green Manitoba, Manitoba

Hydro and the International Institute for Sustainable Development. Activities also included continued education and public outreach about water conservation.

- Coordinated the delivery of the third year of the Wetland Restoration Incentive Program with Manitoba Habitat Heritage Corporation and Ducks Unlimited Canada. To date, this program has achieved the restoration of 956 acres of wetlands which function to sequester 3,720 tonnes of carbon dioxide equivalents per year, a function which will continue for the next 40 years.
- Provided secretariat and advisory services for the Manitoba Water Council, a statutory body that provides advice to the Minister on policies, programs, plans, and legislation needed to achieve the department's vision, mission and guiding principles. The Water Council completed a public engagement process across Manitoba in order to better understand Manitoban's perspectives on wetlands. The Council released a 'What We Heard' document which was posted on its website: www.manitobawatercouncil.ca in the fall of 2010.
- Participated in the Canadian Council of Ministers of the Environment activities, including the development of a guidance document on water monitoring and climate change, chairing of the committee on groundwater and co-chairing the Water Agenda Development Committee.
- Coordinated Manitoba Water Stewardship's technical review of 12 project applications to the Lake Winnipeg Basin Stewardship Fund and provided funding recommendations to Environment Canada.
- Coordinated the review of 1150 development related proposals, as indicated in the following table, to minimize negative impacts on water.

Development Proposals Processed	**#**
The Environment Act and Dangerous Goods and Transportation Act Proposals and Draft Licences	113
Subdivision Applications	555
Development Plans and Zoning By-laws (amendments)	170
Infrastructure and Transportation Proposals	18
The Oil and Gas Act Proposals	14
Mine Closure Plan Proposals	11
Land Management Plans & Park Designations	11
Special Projects	8
Crown Land Proposals and Appeals	247
Manitoba Municipal Board Appeals	3
Total	**1150**

Watershed Planning and Programs

The Watershed Planning and Programs Section provides secretariat services to the Conservation District Commission, the governing body responsible and accountable to the Minister of Water Stewardship for overall Conservation District Program management and administration under the authority of *The Conservation Districts Act*. The section also manages and provides advisory and planning services to the Conservation Districts Program and coordinates community-based watershed management planning in Manitoba as mandated by *The Water Protection Act*.

Activities include: forming new and expanding existing conservation districts; facilitating watershed management planning; building capacity to promote effective board governance; coordinating provision of provincial services to conservation districts; and administering conservation district budgets, provincial grant funding, and provincial policy.

The Watershed Planning and Programs Section continued to build provincial-municipal partnerships in watershed management through the Conservation Districts Program. The program is responsible for land and water conservation programming in eighteen conservation districts, involving 153 member municipal governments. Total program expenditures approached $9.0 million, of which $5.615 million was available as provincial grant funding.

Key Results Achieved

- The Conservation District Framework for the Future consensus committee and sub committees developed policy recommendations for a new provincial funding allocation formula and board appointment policy, and continued work on a preferred watershed boundary policy for all conservation districts.
- Staff managed and administered $5.615 million in provincial grants to 18 Conservation Districts with total program funding administration of $9.0 million.
- Staff drafted a conservation district formation proposal on behalf of the municipalities within the Roseau River watershed and coordinated expansion activities with;
  - Assiniboine Hills Conservation District to include the City of Brandon;
  - Upper Assiniboine River Conservation District to include the Town of Virden;
  - West Interlake Watershed Conservation District to include the Rural Municipalities of Siglunes and Grahamdale;
  - Little Saskatchewan River Conservation District to include the Village of Erickson; and
  - Turtle Mountain Conservation District to include the Town of Hartney.
- Staff provided support services to 18 Conservation District Boards including all aspects of governance, finance, policy development, programming, operations, planning, and human resources.
- Fifteen public meetings were hosted by 5 water planning authorities to discuss watershed management topics including land and water management, conservation, drinking water quality and ecosystem protection.
- Senior and regional watershed planners provided planning and support services for 23 integrated watershed management plan processes as required through provisions of *The Water Protection Act.*
- A memorandum of understanding was signed to designate the Kelsey Conservation District as the water planning authority to initiate the integrated watershed management planning process for the Saskatchewan-Carrot River watershed.
- In addition to the $5.615 million provided to the 18 conservation districts, Manitoba Water Stewardship also provided financial support to six conservation districts, totalling $150,000 in 2010/11, to support implementation of integrated watershed management plans and a $25,000 grant to the Cooks Creek Conservation District for the development of a plan.
- Staff participated on the St. Malo Lake Stewardship Working Group (http://www.srrcd.ca/smlsp.php) in association with Seine-Rat River Conservation District, the Rural Municipality of De Salaberry, and the St. Malo Chamber of Commerce.
- An integrated watershed management planning display was developed for extension and awareness at conventions.

- Staff provided the content and design to launch a new section of the provincial website (http://www.gov.mb.ca/waterstewardship/iwmp/index.html) dedicated to integrated watershed management planning in Manitoba.
- Two Conservation Districts Commission meetings were held and one workshop was hosted for provincial appointees.
- Coordinated the development and printing of the Conservation Districts Program Annual Report for the Legislative Assembly of Manitoba containing the activities and expenditures of all 18 conservation districts.
- Staff acted in extension and advisory capacity to the Manitoba Conservation Districts Association, the Association of Manitoba Municipalities, and other partner agencies.
- Staff participated on six interdepartmental land, water, and planning-based committees.

Water Stewardship Fund

The Water Stewardship Fund continues to be an integral program for supporting initiatives that maintain or improve the stewardship of Manitoba's water.

The Water Stewardship Fund supports projects that contribute to maintaining the quality and quantity of water, wetlands, riparian areas and aquatic habitats in Manitoba and supports projects addressing the following priority program areas: watershed management planning and implementation, water-related scientific research, education and capacity building, water conservation, water quality, and economic development. In addition, the Water Stewardship Fund continued to support a sub-allocation of $33,644.09 for the Zebra Mussel and Other Aquatic Invasive Species Program, as Manitoba remains vulnerable to invasion by zebra mussels and other aquatic invasive species.

Total Allocation from SDIF for 2010/2011	**$300,000.00**
Applications Processed	48
Applications Approved	10
Total Amount for Grants Approved	$181,153.00
Total Amount for Grants Expended	$181,153.00
Zebra Mussel and Other Aquatic Invasive Species Program	$33,644.09
Recovery for Water Stewardship Programs	$85,000.00
Total Expended	$299,797.09

Table EC.2

25.2(b) Planning and Coordination

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	1,562	26.75	1,861	(299)	1
Other Expenditures	396		306	90	2
Total Sub-Appropriation	1,958	26.75	2,167	(209)	

1. Under expenditure is due to vacancies.
2. Over expenditure is due to Water Smart payments.

Water Science and Management - Administration

The Water Science and Management Branch consists of over 35 scientific and technical personnel, including hydrologists, limnologists, aquatic biologists, hydro geologists, and support staff who provide services in the following main areas:

- managing and protecting the quality and quantity of ground water and surface water including beach water quality;
- providing hydrological scientific services to support the sustainable use of surface water, to assure the protection of people, and to minimize damage to property from floods and droughts;
- protecting the biological and ecosystem health of Manitoba's water systems including programs aimed at preventing the introduction of invasive species;
- managing transboundary water issues that may have potential to affect the quality or quantity of waters that flow to Manitoba from upstream jurisdictions; and
- developing and implementing programs aimed at restoring the health of Lake Winnipeg.

The branch is organized into three sections: Groundwater Management Section, Surface Water Management Section, and Water Quality Management Section. Services are provided to the public, local governments, other units within the department, other Manitoba provincial government departments, and other provincial, federal, and international governments. The Water Science and Management Branch delivers strong, scientifically-based programs to ensure Manitoba's water resources and environment are managed and protected in a sound and sustainable manner, including the protection of human health and property.

The branch is represented on numerous inter-departmental, provincial, national, and international boards and committees, including the following:

- Lake of the Woods Control Board
- Red River Floodway Operation Advisory Board
- Shellmouth Operation Advisory Board
- Aquatic Ecosystem Health Committee of the International Joint Commission's International Red River Basin Board
- Aquatic Ecosystem Health Committee of the International Joint Commission's International Souris River Basin Board
- Prairie Provinces Water Board - Hydrology Committee
- Prairie Provinces Water Board - Water Quality Committee
- Prairie Provinces Water Board - Groundwater Committee
- Canadian Council of Ministers of the Environment - Water Quality Committee
- Canadian Council of Ministers of the Environment – Water Agenda Development Committee (Groundwater)
- Canadian Council of Fisheries and Aquaculture Ministers - National Aquatic Invasive Species Committee
- Invasive Species Council of Manitoba
- Canada-Manitoba Fisheries Advisory Board – Aquatic Invasive Species Committee
- Lake Manitoba Stewardship Board
- Federal - Provincial Lake Winnipeg Basin Science Sub-Committee
- Canada - Manitoba Hydrometric Agreement Coordination Committee

Activities across the Water Science and Management Branch in 2009/10 included the following:

Activity	Number
Reviewed proposals for livestock operations	6
Reviewed proposals for drainage or culvert Water Rights licences	119
Reviewed proposed development plans, by-laws and subdivisions	140
Reviewed proposals for sale or lease of Crown lands	238
Reviewed proposals for highway culverts, bridges, etc.	7
Reviewed proposals and draft licences under *The Environment Act*, plans for mine closures, pipelines and Canada-Manitoba Infrastructure projects	74
Reviewed proposals for funding under the Sustainable Development Innovations Fund, the Water Stewardship Fund, and the Lake Winnipeg Basin Stewardship Fund	23

Table EC.3

25.2(c).1 Administration

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	173	3.00	209	(36)	1
Other Expenditures	135		142	(7)	
Total Sub-Appropriation	308	3.00	351	(43)	

1. Under expenditure is due to vacancy.

Water Science and Management - Groundwater Management

The Groundwater Management Section is responsible for evaluating, monitoring, and protecting the province's groundwater resources. Major activities include: administering *The Ground Water and Water Well Act;* undertaking studies to map the occurrence and quality of groundwater; monitoring groundwater quality and water levels and storing this information in data bases; evaluating the sustainable development capacity of aquifers; and carrying out studies to assess the potential for water quality impacts from various human activities.

Key Results Achieved:

- Through participation on watershed and aquifer management programs and through support for regional water well surveys being undertaken by conservation districts, the public, and other government agencies have become more informed of groundwater conditions in many parts of the province and homeowners have been made aware of the water quality from their well and individual responsibilities for well maintenance.

- Groundwater mapping was undertaken in several parts of the province to support integrated watershed or aquifer management plans. Staff from the section participated in the development or implementation of eleven watershed management plans and four groundwater management plans. Updates on aquifer conditions were provided for the Oak Lake, Assiniboine Delta and Winkler aquifers as part of continuing input to these plans.

- Detailed field, office, and modelling work continued in south eastern Manitoba to improve our understanding of groundwater conditions in this area. The information will improve the digital groundwater model that will be used for sustainability evaluations. Nineteen test holes were drilled to evaluate the extent of sand and gravel aquifers in the Sandilands area, with most of these wells completed as observation points. Additional groundwater sampling and evaluation of aquifer hydraulics was also carried out. Calibration of the three-dimensional groundwater model for the area continued and simulations using the model were carried out, primarily to examine how recharge occurs to the major bedrock aquifers and impacts from large pumping centers.

- Additional studies of groundwater/surface water interactions were carried out in the Sandilands area and on the Winkler aquifer, involving the drilling of additional test holes, installation of monitoring wells and water sampling. The objectives of these studies are to examine the role of groundwater in maintaining wetlands on the west side of the Sandilands and to better understand the role of Deadhorse Creek as either a recharge or discharge zone in the Winkler aquifer.

- Twenty-seven firms were licensed under *The Ground Water and Water Well Act* to drill water wells in Manitoba. The Well Drilling Liaison Officer conducted regular visits and provided communication between the well drilling industry and government. The officer also investigated and resolved a number of complaints.

- The section has continued to work through a federal/provincial committee to support the process for selection of burial sites for livestock mortalities in the event of a mass mortality event.

- The section has also participated in a joint Canada/USA program to evaluate the feasibility of deep disposal of liquid CO_2 in deep geological formations.

Key Program Outputs:

- The section operated a groundwater monitoring network consisting of approximately 550 monitoring wells located on major and minor aquifers. Groundwater levels were recorded continuously at most sites while groundwater quality sampling was done on selected wells.

- The groundwater monitoring network update and modification project was continued as part of an ongoing comprehensive evaluation. Approximately forty observation wells were permanently sealed after having been identified as failing, redundant, or no longer required as part of the provincial network.

- Approximately 1,320 water well logs and 65 abandoned well reports submitted in 2010/11 or obtained during water well inventories carried out by conservation districts were entered into the GWDrill data base, generally within 30 days of receipt. Approximately 930 groundwater chemistry analyses were also entered into the data base, associated with well logs. Water level information collected from the observation well network was also entered in the HYDATA data base. Information from these data bases is available on request to the public or private sectors.

- The section responded to nearly 800 telephone and written requests for groundwater information and advice from the private and public sectors, and also provided reviews and comments on approximately 50 development proposals under *The Environment Act* and other review processes. Copies of the full water well data base were provided to more than 80 public and private users.

- The section also worked co-operatively with the Geological Survey of Canada in the development of a national groundwater data base and software to allow mapping and data analysis to be carried out, test drilling of buried valley aquifers and geophysical surveys.

Table EC.4

25.2(c).2 Groundwater Management

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	1,002	14.00	996	6	
Other Expenditures	399		523	(124)	1
Total Sub-Appropriation	1,401	14.00	1,519	(118)	

1. Under expenditure is due to reduction in major drilling contracts for sampling collection and program delays (well sealing, field water sampling, water well log scanning).

Water Science and Management - Surface Water Management

The Surface Water Management Section provides hydrological, scientific services to support the sustainable use of surface water, to assure the protection of people, and to minimize damage to property from floods and droughts. This is done through various activities including the collection of hydrometric data, providing technical direction and advice on the operation of the Red River Floodway and the Portage Diversion and being actively involved with other Canadian and international jurisdictions to share experiences and information on drought and flood management practices. Planning and engineering studies are undertaken to guide water use, allocation, and licensing decisions, to plan and design waterways, and to provide input to multi-disciplinary resource management activities. Hydraulic and hydrologic information is provided to the public. Research and advanced technical studies are conducted in areas such as watershed hydrologic modelling, river geomorphology, hydrodynamic modelling, and river ice engineering.

Key Results Achieved:

- The Surface Water Management Section provided input and advice on the sustainable supply of water available for allocation and for instream flows under *The Water Rights Act*.

- The section provided technical direction on the operation of the Red River Floodway and the Portage Diversion, produced the 2010 Spring Red River Floodway Operation Report required under *The Red River Floodway Act*, and provided technical support to floodway studies.

- A public review of the Public Review of the Red River Floodway rules of operation was undertaken and a report was provided to Manitoba Conservation's Environmental Assessment and Licensing Branch on November 1, 2010. The report contains a number of next steps with respect to ice jams, communications, transportation impacts, and compensation. An email data base was developed in response to the public review that includes contact information for those municipalities who request advanced notice of major gate operations.

- The Section is involved with the City of Winnipeg and KGS Group to better define the damages to basement flooding from intense rainfall events associated with high Red River water levels.

- The Section is continuing the development of drought management strategies and plans for Manitoba. A draft conceptual framework has been developed. Analysis is being done to select drought indicators and background information is being compiled and summarized for the plan.

- As required, the Section produced Water Availability and Drought Conditions reports through the analysis of data including weather and precipitation predictions.

- The Section participated on several of the Red River Basin Commission working groups. A report was prepared on "Water Conservation for Residential, Municipal, Commercial, and Industrial Needs" as part of the Commission's work on "Immediate Drought Response Processes."

- The Section participated on the Steering Committee of the Agriculture and Agri-Food Canada, Agri-Environment Services Branch examining the feasibility of an internet-based system to communicate drought conditions and risk to Manitobans. The first phase of the project pertaining to a needs assessment was completed.

- The Section managed the hydrometric monitoring needs of the province including the delivery of the Manitoba portion of the Canada-Manitoba Hydrometric program, which forms a part of the National Hydrometric Program. The operating period of 41 hydrometric stations was extended from four (March to June) to eight months (March to October) to monitor the hydrologic impacts of extreme summer weather due to climate change.

- The Section provided hydrologic and other technical support to the development of the Fishing Lake Channel operating agreement between the Department and the Saskatchewan Watershed Authority.

- The Section represents Manitoba on the International Joint Commission's Lower Pembina River Task Force formed to identify and oversee overall technical work related to finding a scientific solution to flooding within the Lower Pembina River Basin.

- The Section maintained databases containing historical streamflow and water level information.

- Management of the Department's real-time water level data acquisition system for drought and flood monitoring was conducted by the Section. The existing data acquisition and database system is being updated with a state-of-the art technology data acquisition and database system (AQUARIUS). This system will help to harmonize data collection and management for the development of a drought management plan and will assist in timely flood forecasts.

- The Section provided information to the North American Drought Monitor and Agriculture and Agri-Food Canada for updating the Monthly Regional Drought Map.

- With funding under the Prairie Regional Adaptation Collaborative, the Section has initiated a water supply and demand for the Manitoba portion of Assiniboine River under current and future climate change scenarios.

- The Section developed discharges for design of waterways and waterway openings and to accommodate passage of fish for infrastructure planning, design, and environmental approvals.

- The Section conducted research work developing tools for optimal water supply analysis, hydrological design, and design standards of agricultural drains.

- In collaboration with the Canada Centre for Remote Sensing, ice cores were extracted from the Red River ice cover to ground truth RADARSAT-2 imagery. Ice type maps were successfully produced and were used by the Ice Jam Mitigation Program to guide ice surveys.

- Due to high flows in the Red River, ice cover during winter 2010 – 2011 consisted mainly of consolidated ice formed by frazil ice. Structural and thermal properties of the ice were studied to complement ice jam mitigation efforts.

- The ice jam model RIVICE was implemented for the following Red River stretches:
    - In Winnipeg to help guide Floodway operations during river ice conditions
    - In Selkirk to run and evaluate scenarios of artificial ice cutting and breaking
    - At Netley to determine the effectiveness of mitigating ice jam flooding.

Key Program Outputs:

Operation of stream flow and lake level gauging stations in partnership with the federal government under the Canada-Manitoba Agreement for Water Quantity Surveys	208
Acquisition of real-time hydrometric data from Manitoba and adjacent jurisdictions for flood and drought monitoring	375
Hydrologic analysis of the sustainable supply of water available for allocation under *The Water Rights Act* or provision of input to assessments	16
Design and fish passage discharges for Manitoba Infrastructure and Transportation and other sites	350
Preparation of Water Availability and Drought Condition Reports	1
Provision of hydrological support for the development of a number of integrated watershed management plans under *The Water Protection Act*.	4

Table EC.5
25.2(c).3 Surface Water Management

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	667	7.00	592	75	1
Other Expenditures	115		125	(10)	2
Total Sub-Appropriation	782	7.00	717	65	

1. Over expenditure is due to filling of vacancies and staff turnover allowance resulting from full staff complement.
2. Under expenditure is due to resource management.

Water Science and Management - Water Quality Management

The Water Quality Management Section provides services in support of the Department's mission by protecting, maintaining, and where necessary, rehabilitating the quality of Manitoba's aquatic ecosystems. This is achieved through a number of activities including operating and maintaining long-term and short-term water quality programs, managing and providing water quality data to various client groups, responding in a timely manner to emergencies and emerging water quality issues, and developing policy to further protect and enhance Manitoba's surface water quality.

Key Results Achieved

- Regular monitoring of water chemistry and benthic invertebrates from numerous Manitoba streams and rivers was conducted. Data are used to establish long-term trends in water quality, such as nutrient loading, and to qualify general water quality conditions, such as with the Water Quality Index. Benthic invertebrate data are used in concert with water chemistry to further assess the aquatic health of Manitoba's streams and rivers.

- The Water Quality Management Section is responsible for the acquisition of on-going, high, quality laboratory analytical services to meet the needs of Manitoba Water Stewardship, Manitoba Conservation, Manitoba Health and Healthy Living, and Manitoba Agriculture, Food and Rural Initiatives including ensuring on-going communication and collaboration with contracted analytical laboratories.

- The Water Quality Management Section, in collaboration with Manitoba Health, leads efforts to provide information to the general public concerning bathing water quality. Bathing water at approximately 60 Manitoba beaches is monitored each year for densities of the fecal indicator bacteria, *Escherichia coli*, and results are posted on the Department's website. Algal blooms are also monitored for concentrations of toxic algae. Incidents of swimmer's itch and subsequent beach posting are coordinated by the Section.

- The Water Quality Management Section is responsible for implementing the *Nutrient Management Regulation* under *The Water Protection Act (*C.C.C. M. c. W65). This regulation encourages responsible nutrient planning and regulates the application to land of substances containing nitrogen and restricting the development of certain types of nutrient generating facilities in sensitive areas.

- *The Phosphorus Reduction Act* (*Water Protection Act* amended) came into effect on July 1, 2010 and the Section was responsible for implementation. The Act restricts the phosphorus content in household automatic dishwashing detergents that can be manufactured, sold, distributed or imported into Manitoba for use in Manitoba. Under the legislation, only those automatic dishwashing detergents that contain 0.5 % phosphorus or less can be sold or distributed throughout the province. The Section worked with manufactures, retailers, and distributors of automatic dishwashing detergents to ensure compliance with the Act.

- The continuation of collaborative work with Environment Canada and other federal and provincial government departments to reduce nutrient contributions to Lake Winnipeg and its watershed was carried out by the Section. In 2010/2011, the Section conducted physical, chemical and biological sampling on Lake Winnipeg from the *MV Namao*. Three scientific cruises on Lake Winnipeg were completed in 2010. The Section also led the 2011 winter sampling on Lake Winnipeg in both the north and south basins.

- In September 2010, Canada and Manitoba signed the *Canada-Manitoba Memorandum of Understanding Respecting Lake Winnipeg and the Lake Winnipeg Basin* to facilitate a cooperative and coordinated approach in efforts to understand and protect the water quality and ecological health of Lake Winnipeg and the Lake Winnipeg Basin. A Steering Committee was formed under this

Memorandum of Understanding and technical-secretariat support for the Committee is provided by the Section.

- Work continued to compile, analyze, and assess comprehensive water chemistry, biological and physical data for the Lake Winnipeg State of the Lake Report which will be co-authored by Manitoba Water Stewardship and Environment Canada.

- The Water Quality Management Section provided technical secretariat support to the Lake Manitoba Stewardship Board. The Section also provided support to the Special Advisor to the Minister on Lake Winnipeg Stewardship.

- The Water Quality Management Section leads government's efforts to prevent accidental introductions of aquatic invasive species with significant effort placed on public education. In 2010/2011 a number of educational materials were developed to inform the public of actions that can be taken to reduce the risk of introduction.

Key Program Outputs:

- Water quality was monitored at 79 long-term stations across Manitoba during 2010/2011. The Section worked in collaboration with Conservation Districts, Environment Canada, the University of Manitoba, and Manitoba Hydro in collecting water quality samples at some sites. Benthic invertebrates were monitored at 2 sites across Manitoba.

- Approximately 60 Manitoba beaches were monitored during the summer of 2010. Approximately 145 water samples were collected for analysis of algal toxins and 110 samples were collected for enumeration of cyanobacteria densities to assess the risk to bather health.

- The Section provided technical and scientific support to a variety of audiences, including other government agencies, the public, stakeholders, etc. and recommended activities to alleviate or abate specific water quality concerns.

- The Section also provided educational material and support to the public on water quality to foster greater awareness and to empower local stewardship.

- Through work with manufactures and retailers, the availability of "lake-friendly" lawn fertilizers containing less than one per cent phosphorus by weight was increased across the province.

- Through work with manufactures, retailers, and distributors, the availability of "lake-friendly" automatic dishwashing detergents with less than 0.5 % phosphorus was increased across the province.

- Forty-five Nutrient Management Plans were registered for golf courses across Manitoba.

- Data, interpretation, and water quality recommendations concerning improvements to surface water quality were made through the Integrated Watershed Management Planning Process. The Section contributed to five integrated watershed management plans. The Section worked closely with conservation districts to deliver land-based programming aimed at reducing impacts to water quality.

- The Section implemented a cooperative, proactive strategy to prevent the accidental introduction of zebra mussels and other aquatic invasive species to Manitoba. In 2010/11, over 600 inspections were made to aquatic-based equipment (such as boats) that were brought into and across Manitoba. In 2010 and early 2011, efforts to heighten public awareness of zebra mussels and other aquatic invaders were strongly supported with additional educational material, an aquatic invasive species reporting hotline, and attendance at numerous public events. The Section worked cooperatively with Environment Canada to conduct weekly zebra mussels sampling on the Red River at Emerson. Approximately 50 samples were collected and analyzed for the presence of larval zebra mussels.

Table EC.6

25.2(c).4 Water Quality Management

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	1,164	20.00	1,371	(207)	1
Other Expenditures	578		722	(144)	2
Total Sub-Appropriation	1,742	20.00	2,093	(351)	

1. Under expenditure is due to vacancies.
2. Under expenditure is due to a reduction in lab testing rates, related to new laboratory contracts, and reduced water quality testing.

Fisheries Branch - Administration

Fisheries Branch oversees the sustainable development of fisheries resources. Management programs are developed to provide greatest benefits to Manitobans by maintaining or enhancing populations and habitat, monitoring harvest and habitat alterations, and allocating resources for best return. The Branch directs and reports on programs and budgets, legislation and policy, standards and guidelines, and co-ordination and monitoring. The Branch also administers the Fisheries Enhancement Fund and the Northern Fisherman's Freight Assistance Program.

The objectives of the Director's office is to ensure the appropriate allocation of staff and budget by identifying management priorities and programs consistent with government policy, and to develop and interpret branch policies to ensure consistency with sustainable development principles and guidelines.

Detailed information about fisheries activities can be found on Manitoba Water Stewardship's website.
http://www.gov.mb.ca/waterstewardship/fisheries/commercial/history.pdf

Information includes data on:

- Distribution of Fish Stocked from Fish Hatcheries
- Licensed Fishers Employed in Manitoba Commercial Fishery
- Commercial Fishing Production (Round Weight kg), Total Value and Employment
- Commercial Fishing Production (Round Weight kg) by Area and Total Value by Species,
- Angling Licence Sales and Revenue
- Bait Fishing Industry Statistics
- Manitoba Fish Farming Statistics

Key Results Achieved

- Review of fisheries governance continued to assure contemporary approaches to partnering and collaboration on management activities with key interest groups.
- Regulatory variances were prepared as required to address season opening and closing dates and quota adjustments for sustainability purposes.
- The Branch provided input to policy development in key areas, particularly Aboriginal consultation and eco-certification.
- Integrated planning continued by involving user groups through the work of the Fisheries Enhancement Fund Project Review Committee in Branch planning exercises. This process contributed to the key principle of user group involvement in developing fish management strategies.
- The Branch participated in the Inter-jurisdictional Working Group, Aquatic Invasive Species Task Group, Species at Risk Task Group, and Eco-certification Traceability Task Group reporting to the Canadian Council of Fisheries and Aquaculture Ministers and the Freshwater Fisheries Committee.
- Manitoba Water Stewardship and Department of Fisheries and Oceans continued work in areas of mutual interest through the *Canada-Manitoba Fisheries Advisory Committee.*

Table FI.1
25.2(d).1 Administration

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	115	1.00	118	(3)	
Other Expenditures	252		231	21	1
Total Sub-Appropriation	367	1.00	349	18	

1. Over expenditure is due to increased operating costs, including desktop and telecommunications.

Fisheries Branch - Fish Hatchery and Fish Culture

The Section supports conservation, evaluation, restoration, and enhancement of fish and aquatic ecosystems to achieve a net gain in healthy, productive fish stocks. It also administers the Fisheries Enhancement Fund. The objective of the section is to develop, co-ordinate and evaluate an aquatic ecosystem program that supports the sustainability of aquatic ecosystems and enhances, restores and develops fish habitat providing the potential for the habitat to sustain fish resources and the benefits that they provide Manitoba.

Key Results Achieved

- A total of 483 development proposals were reviewed.
  - 45 proposals were reviewed under *The Environment Act*.
  - 29 draft licenses, 18 pre-licensing *environmental* screening proposals, one Environmental Impact Assessment, and two Dangerous Goods and Handling and Transportation proposals were reviewed.
  - Another 388 proposals having potential implications for aquatic ecosystems were reviewed. These included Crown Lands sale/lease/permit applications, municipal development plans/amendments/ zoning bylaws, Mines Branch proposals for oil batteries/mine closures/surface leases, and water withdrawal requests.
- Branch staff participate on several advisory committees including the Pointe du Bois Remediation, Keeyask Generating Station, Minago Open Pit Mine, and Forest Practices.
- The Branch assisted the implementation of the National Aquatic Animal Health Program under the Canadian Food Inspection Agency.
- As part of the Environmental Effects Monitoring Program, monitoring of two pulp and paper and 10 mining effluent proposals/programs continued.
- The Grand Rapids and Whiteshell Fish hatcheries underwent extensive facility audits for biosecurity / health status through the Canadian Food Inspection Agency's Compartmentalization Program.
- Continued to work with the Fairford Fishway Working Group to investigate fish use of the fishway and to identify ways to improve fish passage.
- Continued to develop and promote various educational events and tools for Kindergarten to Grade 12
- Continued work on Instream Flow Needs Studies for the Assiniboine, Little Saskatchewan and Whitemud rivers.
- Participated on an interdepartmental working group to develop an all terrain vehicle land use policy.
- Sixty five scientific collection, 20 live fish handling, and 11 salmonid import permits were issued.

FISH CULTURE

The Fish Culture Program rears and distributes fish, ranging in size from fry to adult fish to meet requirements for commercial, recreational and conservation fish stocking needs throughout the province. To achieve these outcomes, the program operates two year-round fish hatcheries at Whiteshell and

Grand Rapids (in partnership with Manitoba Hydro), and two seasonal facilities at Swan Creek and Clearwater Lake.

Key Results Achieved

- Identified requirements for infrastructure upgrades needed to address environmental liabilities at the Whiteshell hatchery, which welcomed approximately 5,000 visitors to its Interpretive Centre.
- Commenced a field-based study to test the efficacy of stocking triploid versus diploid rainbow trout.
- Approximately 30 million walleye fry were stocked. Of these, 95% were marked with Oxytetracycline and stocked into four commercial fishing lakes, with almost half (14 million) stocked into Lake Manitoba. A total of 141 lakes were stocked.

Table FI.2
Distribution of Fish Stocked from Fish Hatcheries

	Fry	Fingerling	12-15 cm	18+ cm	Adult (>30 cm)
Grand Rapids Fish Hatchery					
LAKE TROUT	0	334,785	100,420	0	0
RAINBOW TROUT	2,000	174,600	0	0	0
WALLEYE	1,000,000	0	0	0	230
Swan Creek Hatchery					
WALLEYE	21,350,000	0	0	0	0
Whiteshell Fish Hatchery					
BROOK TROUT	0	0	0	18,000	574
BROWN TROUT	0	0	43,400	22,400	1,060
RAINBOW TROUT	0	143,000	23,100	81,750	0
SPLAKE	0	0	0	4,800	0
WALLEYE	7,800,000	0	0	0	0

Table FI.3
Distribution of Sturgeon and Walleye from Stakeholder Groups

	Fry	Fingerling	12-15 cm	18+ cm	Adult (>30 cm)
Other Sources					
LAKE STURGEON	0	0	9,424	0	0
WALLEYE	0	0	475	0	699

Table FI.4
Total Distribution by Species

SPECIES	QUANTITY
BROOK TROUT	18,574
BROWN TROUT	66,860
LAKE STURGEON	9,424
LAKE TROUT	435,205
RAINBOW TROUT	424,450
SPLAKE	4,800
WALLEYE	30,151,404
Total	31,110,717

Table FI.5

25.2(d).2 Fish Hatchery and Fish Culture

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	687	15.31	767	(80)	1
Other Expenditures	73		74	(1)	
Total Sub-Appropriation	760	15.31	841	(81)	

1. Under expenditure is due to vacancy.

Fisheries Branch – Sport and Commercial Fishing Management

The Section develops, administers, and evaluates management programs and policies for recreational, commercial, and domestic use, including commercial bait fishing and trout farming. It also manages the Northern Fishermen's Freight Assistance Program, distribution and reconciliation of commercial fishing licenses, and fish production information. The objective of the Section is to ensure management programs are delivered in an integrated manner that ensures sustainability of the resource and maximizes benefits from its use.

Key Results Achieved

- As part of government's obligation to consult with Aboriginal communities in matters related to constitutionally protected Treaty and Aboriginal rights, the Branch participated in Crown-Aboriginal consultations on conservation measures being considered for Dauphin Lake and tributaries for the 2011 spring.
- Fisheries Branch held a series of public meetings around Lake Manitoba to solicit input in the development of a Lake Manitoba Fisheries Management Plan. Information collected through this process was consolidated into a summary document entitled *"Lake Manitoba Fisheries Management Report on Public Meetings (November 2010)"*.
- *Long Service Fisher Award* program which recognizes the contributions of commercial fishers to Manitoba's social and cultural foundations and economic well-being for 50 years or more.
- Advanced through discussion a new *Lake Winnipeg Fishery Resource Management Board* that would provide fishers an opportunity for greater participation and input into fisheries management decisions.
- The *Lake Winnipeg Quota Review Task Force* completed its review of the Lake Winnipeg commercial fishery and provided the Department with a report entitled *"Technical Assessment of the Status, Health and Sustainable Harvest Levels of the Lake Winnipeg Fisheries Resource"*.
- Extended the Whitefish Optimization Quota Allocation pilot program on Lake Winnipeg for an additional year to provide economic opportunities to fishers by encouraging whitefish deliveries.
- Pre-certification assessments were conducted on Waterhen and Chitek lakes using the Marine Stewardship Council's eco-certification criteria.
- Used the vessel *MV Namao* to collect information to monitor long-term trends of different fish species, determine temporal and spatial patterns, and establish baseline data to allow for trend analyses to assess species responses to ecosystem change.
- The provincial fish ageing assessment unit collected over 4,000 age structures to monitor the Lake Winnipeg commercial fishery and aged over 12,000 structures to support regional fisheries program operations.
- In partnership with Fish Futures, Inc., published the 2011 Manitoba Anglers' Guide that summarizes angling regulations, highlights new and proposed regulations, and includes management and other fisheries information.
- Continued to coordinate Winnipeg's Urban Angling Partnership which offers residents and visitors recreational angling opportunities through structured programs
- Supported the Manitoba Recreational Fishing League, Youth Angling Card initiative, and Gear Up - Tackling the Future programs.

Table FI.6

25.2(d).3 Sport and Commercial Fishing Management

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	807	10.00	723	84	1
Other Expenditures	63		64	(1)	
Total Sub-Appropriation	870	10.00	787	83	

1. Over expenditure is due to severance payment due to retirement and staff turnover allowance resulting from limited vacancies.

Fisheries Branch – Regional Fisheries Resources

The objectives of the Regional Fisheries Management Section is to deliver Fisheries programs at a regional level and to assist in the development and management of related provincial programs, to ensure the maintenance of healthy aquatic ecosystems for the use and well being of present and future generations of Manitobans, to provide input to compliance priorities, to assure the maintenance of long-term sustainability of fisheries resources, and to ensure an effective consultation role on behalf of the Branch with all fishers.

Key Results Achieved

All Regions

- Continued to work with Manitoba Hydro and Water Science and Management Branch per the Manitoba and Manitoba Hydro Memorandum of Understanding about Lake Winnipeg Regulation/Churchill River Diversion Monitoring Activities. This was the third year of the Coordinated Aquatic Monitoring Pilot Program and is the last year of the pilot phase. Environmental monitoring activities conducted by both Manitoba and Manitoba Hydro have been coordinated and are now using common methodology, which provides Fisheries Branch access to fish stock assessment data collected by Manitoba Hydro's consultants.
- Regional staff contributed to the development of Recovery Plans for Lake Sturgeon on several of the major watersheds in the Province (Winnipeg, Assiniboine, Saskatchewan, Nelson and *Churchill rivers)*. Fisheries and Oceans Canada is the lead agency in this process under the federal *Species at Risk Act*, and Fisheries Branch is heavily involved in sturgeon management, working with Management Boards, conducting population assessments and delivering stocking programs.
- Worked with Manitoba Conservation to issue commercial fishing licenses, bait fishing licenses, fish farming licenses, and derby permits.
- Reviewed Licensing Advisory Committee applications (for outcamps, outfitting licenses, and other resource-related tourism activities), environmental licensing proposals, land use applications, water control works licences, resource allocation requests, development proposals and scientific collection permit applications.

Northwest Region

- Co-chaired the Cedar Lake Resource Management Board and provided input to the Opaskwayak Cree Nation, Moose Lake, and Cormorant Resource Management Boards,
- Regional staff participated in a number of meetings with the Napanee Bay Fishermen's Association (Easterville), Saskatchewan River Fishermen's Association (The Pas/Opaskwayak **Cree Nation**), Moose Lake Fishermen's Association, Pukatawagan Fishermen's Association, and Snow Lake commercial fishers.
- Reviewed and provided input to Crown Lands on applications for wild rice seeding and harvest.
- Participated in the Saskatchewan River Sturgeon Management Board and managed the Manitoba portion of the sturgeon field program. A total of 154 sturgeon were tagged and released in 2010,
- Completed index-netting to assess fish populations on Cedar Lake, Saskatchewan River and Cormorant Lake.

Northeast Region

- Regional staff participated in the Norway House Resource Management Board and provided input to four other Resource Management Boards. The purpose is to represent Manitoba on the Boards, fulfilling the obligations of specific agreements and develop meaningful relationships with Aboriginal communities and resource users.
- Participated in the Southern Indian Lake Environmental Monitoring Committee to address environmental issues arising from hydroelectric development. Annual monitoring of whitefish stocks continued and new ageing methods revealed that whitefish stocks may not be as robust as previously believed. Commercial production on this lake continued to decline as walleye stocks remain low for a lake of this size.
- Participated in the Nelson River Sturgeon Board and managed its field program. The Board operates an ongoing program to raise sturgeon fingerlings for school aquarium programs and release.
- Completed fish stock assessment netting in five recreationally angled lakes in the Wabowden area.
- Completed fish stock assessment netting in six commercial/domestically fished lakes in the region.

Eastern Region

- Non-lethal sampling protocols for assessing fisheries populations on accessible and developed lakes in the Eastern Region were implemented
- Completed all regional walleye and trout stocking and updated the three year regional stocking plan.
- Completed the 27th annual Winnipeg River Lake Sturgeon monitoring program. The information gathered through this program will be critical in the long term management of lake sturgeon,
- Completed the third year of the Falcon Creek walleye monitoring project in conjunction with the annual Fish Culture spawn collecting program.
- The Coordinated Aquatic Monitoring Pilot Program was completed on Manitgotagan Lake and Lac du Bonnet.
- The Manitoba portion of the national HydroNet research project was finalized and is ready for the field component. This project promotes sustainable hydropower development and healthy aquatic ecosystems, and includes 10 universities, 3 industry partners (Nalcor, Manitoba Hydro and BC Hydro), and 3 government partners (Fisheries and Oceans Canada, Environment Canada, and Quebec's Ministère des Ressources Naturelles et de la Faune).

Central Region

- Fish community data were collected with assistance from Waterhen commercial fishers to support the development of a suitable fisheries management plan as part of departmental eco-certification efforts.
- Research was conducted on Inland Lake to determine the feasibility of using 2.5" mesh net to reduce the standing stock of yellow perch in order to increase walleye stocking success.
- Northern pike were sampled on Gull Lake using non-lethal sampling protocols to determine the effects of a regulatory change to northern pike harvest.
- Worked with the Teulon Game and Fish Association to determine future management of the Gull Lake fishery.
- The first phase of the Lake Manitoba Fisheries Management Plan to determine the scope of issues was completed. Seven communities were visited and fisheries users' comments were compiled and, with assistance from the Lake Manitoba Stewardship Board, a vision for Lake Manitoba was defined "to have a healthy lake environment which supports sustainable fish stocks and economically viable fisheries".
- In partnership with the Freshwater Fish Marketing Corporation and commercial fishers, the Branch conducted a whitefish study on Lake Winnipeg (north basin).
- The annual Lake Winnipeg Index stock monitoring program was completed and revealed relatively strong year classes of three to five year-old walleye in the north basin while in the south basin the population was still dominated by the 2001 age class (9 year old).
- Index netting was conducted on Lake Manitoba, Lake St. George, and Lake St. Martin as part of the branch's stock monitoring program.
- In cooperation with University of Nebraska (Lincoln), a research program on the Red River was initiated to study population dynamics and ecology of channel catfish.

Western Region

- Consulted with West Regional Tribal Council, other First Nations, and Métis communities concerning proposed conservation measures for the walleye stocks of Dauphin Lake and its tributaries in the spring.
- Staff acted in an advisory capacity to 13 Conservation Districts in the region.
- Staff participated on the Technical Advisory Committee for the Integrated Watershed Planning process for the Swan Lake and the Wilson River Watersheds, and continued to work on the Little Saskatchewan, Upper Assiniboine River, Swan Lake and Pembina River Integrated Watershed Management Plans.
- Assisted with the installation of aeration systems at Tokaryk and Persse lakes, and instream flow work on the Little Saskatchewan River.
- Completed annual index netting on Lake Winnipegosis, Lake of the Prairies, and Dauphin Lake. Conducted commercial sampling on Lake Winnipegosis and Dauphin Lake.
- Stocked 9,200,000 walleye fry and 312,000 salmonid fingerlings in approximately 80 waterbodies throughout the Western region to supplement natural recruitment and diversify angling opportunities.
- Assisted local angling groups with stocked trout water assessments in the Duck Mountains and Porcupine Provincial Forest, as well as spring trap netting and walleye telemetry on Whitefish and Wellman lakes.
- Reviewed Louisiana Pacific's Annual Operational Plans and Mountain Quota Holder's Association for harvesting near waterways and helped develop mitigation plans for approximately 50 harvest blocks and associated crossings.

Table FI.7
25.2(d).4 Regional Fisheries Resources

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	1,087	15.00	989	98	1
Other Expenditures	177		179	(2)	
Total Sub-Appropriation	1,264	15.00	1,168	96	

1. Over expenditure is due to severance payment due to retirement and staff turnover allowance resulting from full staff complement.

Northern Fishermen's Freight Assistance

The Northern Fishermen's Freight Assistance program assists marginal commercial operations by partial subsidization of transporting certain species from selected lakes to Winnipeg. Fishers pay the first 20¢/kg of freight, Manitoba pays the next 45¢/kg, and fishers pay any costs over 65¢/kg. Eligible species are whitefish, pike, lake trout, perch, goldeye, tullibee and sucker. Most subsidy payments to fishers are issued weekly by Freshwater Fish Marketing Corporation on behalf of Manitoba with the remainder being paid directly by the Branch at season end.

Key Results Achieved

- To ensure expenditure does not exceed the maximum of $400,000 set in 2000, fishers receive an initial payment, usually 70% of their estimated eligibility. They receive final payment at fishing-year end. While a full 30% final payment may not be possible when production is high, a final payment higher than 30% may occur in low-production years. The Northern Fishermen's Freight Assistance paid about $321,380 to 249 fishers for 2010 summer season. Payments to 94 fishers for winter season were about $78,620.

Table FI.8
25.2(d).5 Northern Fisherman's Freight Assistance

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits					
Other Expenditures	410		410	0	
Total Sub-Appropriation	410		410	0	

Fisheries Branch – Fisheries Enhancement Fund

The Manitoba Fisheries Enhancement Initiative was established in 1993 when Manitoba sport fishing groups and commercial fishers indicated a willingness to pay more for their fishing license if a portion went to build fish stocks. The Fisheries Enhancement Initiative funded almost 300 projects throughout Manitoba aimed at strengthening fish populations, improving fish habitat, or fisheries education.

The Fisheries Enhancement Fund was introduced in March 2007 with significant improvements to the enhancement program with new categories, including fisheries research, fish stock assessment and monitoring, fisheries development through capital investment and stocking, fisheries habitat rehabilitation and enhancement, as well as education and outreach initiatives pertaining to fisheries. The project review committee includes broader representation from a number of associations and stakeholders with an interest in enhancing Manitoba's fisheries.

The objective of the Fisheries Enhancement Fund is to ensure that adequate fish stocks exist for the use and enjoyment of current and future generations of Manitobans, to promote local involvement of fisheries resource stakeholders, and to increase public understanding of the importance and value of fish and fish habitat.

Key Results Achieved

- Staff received 56 project applications of which 34 projects were funded.
- The annual Fisheries Enhancement Stamp Competition was held in September 2010. The winning artwork "Family Fishing" painted by Douglas Tritthart was unveiled at Oak Hammock Marsh.

Table FI.9
25.2(d).6 Fisheries Enhancement Fund

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits					
Other Expenditures	818		850	(32)	1
Grants					
Total Sub-Appropriation	818		850	(32)	

1. Under expenditure is due to lower general operating costs resulting from resource management.

Table FI.10
Licensed Fishers Employed in Manitoba Commercial Fishery, 2009/10

	Northern Lakes	Lake Winnipeg	Lake Manitoba	Lake Wpgosis	Other Lakes	Overall*
Summer						
Licence Holders	369	832	6	38	49	1,291
Winter						
Licence Holders	236	289	374	164	185	1,226
Annual						
Licence Holders	476	869	375	167	185	1,979

Note: Those who fish in more than one area or season, or who fish both as hired persons and licence holders, are counted only once in the appropriate total column. Commercial fishing licences are issued on a fiscal year basis (April 1st - March 31st). Commercial fishing statistics for 2010/11 were not available in time to be included in this report. They will appear in the annual report for the next fiscal year. *Annually, licensed commercial fishers hire approximately 1,000 hired men/helpers.

Table FI.11

Commercial Fishing Production (Round Weight kg), Total Value and Employment (Licensed Fishers) 2000/01 to 2009/10.

Year	Northern Lakes		Lake Winnipeg		Lake Manitoba	
	Weight (kg)	$ Value	Weight (kg)	$ Value	Weight (kg)	$ Value
2000-01	3,318,650	5,608,800	6,217,850	20,386,750	2,342,400	2,847,050
2001-02	3,188,100	5,341,850	6,237,950	20,380,350	2,115,750	3,797,100
2002-03	3,260,350	5,750,000	6,204,150	20,894,400	2,286,850	2,877,650
2003-04	3,025,250	4,883,100	6,543,300	17,030,250	1,995,650	1,992,400
2004-05	2,813,900	4,299,400	6,380,100	16,724,900	1,362,650	1,046,900
2005-06	2,231,600	3,135,350	6,397,500	16,736,250	1,074,000	1,201,500
2006-07	2,294,400	3,900,400	6,355,550	17,707,500	1,211,950	1,575,500
2007-08	2,140,916	3,013,438	6,201,620	17,797,541	935,164	1,261,735
2008-09	1,891,950	2,926,796	6,818,695	19,623,797	928,023	1,473,616
2009-10	1,852,977	2,504,732	6,763,585	18,640,267	795,132	1,355,354

Year	Lake Winnipegosis		Other Lakes		Manitoba Total		No. of Licencees*
	Weight (kg)	$ Value	Weight (kg)	$ Value	Weight (kg)	$ Value	
2000-01	2,753,550	2,004,200	892,250	1,131,450	15,524,700	31,978,250	2,228
2001-02	2,577,000	1,846,600	702,400	917,200	14,821,200	32,283,100	2,156
2002-03	2,681,150	1,416,400	661,250	827,800	15,093,750	31,766,250	2,204
2003-04	2,221,550	1,111,300	1,171,200	1,832,850	14,956,950	26,849,900	2,354
2004-05	1,079,350	842,000	1,113,800	1,826,650	12,749,800	24,739,850	2,404
2005-06	1,343,600	854,000	1,016,600	1,852,500	12,063,300	23,779,600	2,310
2006-07	1,228,900	916,500	1,110,450	1,879,400	12,201,250	25,979,300	2,206
2007-08	1,143,477	799,159	722,618	821,282	11,143,795	23,693,155	2,167
2008-09	1,451,871	1,285,677	1,039,638	1,428,048	12,130,177	26,737,934	2,048
2009-10	1,299,150	983,968	1,088,249	1,686,030	11,799,093	25,170,351	1,979

NOTE:
Total value includes both Initial Value and Final Payment. Commercial fishing statistics prior to 2007/08 were based on a fiscal year (April 1st - March 31st). Statistics from 2007/08 on are based on a "fishing year" (May 1st - April 30th). Statistics for 2010/11 were not available in time to be included in this report. They will appear in the annual report for 2011/12.
*Annually, licenced commercial fishers hire approximately 1,000 hired helpers.

Table FI.12
Commercial Fishing Production (Round Weight kg) by Area and Total Value by Species, 2009/10.

Species	Northern Lakes		Lake Winnipeg		Lake Manitoba		Lake Winnipegosis	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
Bass	0	0	7,884	2,091	0	0	0	0
Carp	188	0	6,818	78	2,024	10,404	2,182	9,610
Carp Roe	0	0	60	0	152	686	0	887
Goldeye	2,201	12	12,924	465	0	4	0	1
Mullet	234,984	45,406	103,947	9,714	0	330,082	393,497	371,772
Northern Pike	488,110	88,269	97,461	11,153	0	89,496	52,142	329,534
Perch	220	127	35,344	858	0	106,743	70	220
Pickerel	368,117	27,316	3,690,492	577,720	0	243,856	57,526	32,870
Pike Roe	0	3,572	0	218	0	671	0	8,155
Sauger	6,479	6	518,423	82,890	0	4,441	0	8
Trout	35,493	0	0	0	0	0	0	0
Tullibee	53,885	3,337	3	0	0	0	0	0
Tullibee Roe	1,866	0	0	0	0	0	0	0
Whitefish	431,451	55,726	848,805	745,128	0	6,574	11,036	29,639
Whitefish Roe	6,211	0	11,109	0	0	0	0	0
Total	1,629,205	223,772	5,333,269	1,430,316	2,176	792,956	516,454	782,696

Species	Other Lakes[1]		Total Production			Total Value $[2]		
	Summer	Winter	Summer	Winter	Total	Summer	Winter	Total
Bass	0	0	7,884	2,091	9,975	3,627	1,079	4,707
Carp	1,407	16,695	12,620	36,787	49,406	1,622	3,519	5,141
Carp Roe	99	1,859	310	3,432	3,742	614	6,560	7,174
Goldeye	7	0	15,132	482	15,614	43,492	707	44,200
Mullet	127,699	115,033	860,127	872,007	1,732,134	300,518	286,315	586,832
Northern Pike	173,238	200,274	810,951	718,727	1,529,678	637,080	567,356	1,204,436
Perch	62	19,047	35,695	126,996	162,691	76,824	336,057	412,881
Pickerel	168,784	146,106	4,284,919	1,027,868	5,312,787	13,155,413	3,897,354	17,052,767
Pike Roe	0	5,919	0	18,536	18,536	0	91,973	91,973
Sauger	488	67	525,390	87,413	612,803	1,613,059	306,703	1,919,762
Trout	0	0	35,493	0	35,493	25,299	0	25,299
Tullibee	0	1,245	53,889	4,582	58,470	28,692	2,383	31,075
Tullibee Roe	0	0	1,866	0	1,866	10,731	0	10,731

Whitefish	52,429	56,027	1,343,721	893,095	2,236,815	1,645,306	2,021,595	3,666,901
Whitefish Roe	1,763	0	19,083	0	19,083	106,472	0	106,472
Total	525,977	562,272	8,007,080	3,792,013	11,799,093	17,648,749	7,521,602	25,170,351

[1] Includes; Cedar, Chitek, Crab, Dauphin, Inland, Little Limestone, Little Strong, Pelican, Red Deer, St Martin, Swan, Tan, Waterhen, William.
[2] Total $ Value includes both initial value and final payments.
NOTE: Commercial fishing statistics are based on a "fishing year" (May 1st - April 30th). Statistics for 2010/11 were not available in time to be included in this report. They will appear in the annual report for 2011/12.

Table FI.13

Angling Licence Sales and Revenue 1997/98 to 2009/10

	Resident/Manitoba – Senior Conservation			Total: Resident of Manitoba Senior	
Year	Number	Fee $	Revenue $	Number	Revenue $
1997/98	7,878	5.61	36,615.58	7,878	36,615.58
1998/99	8,700	5.61	40,315.00	8,700	40,315.00
1999/00	8,935	5.61	41,411.35	8,935	41,411.35
2000/01	8,532	5.61	39,537.52	8,532	39,537.52
2001/02	8,621	5.61	39,940.81	8,621	39,940.81
2002/03	8,341	5.61	38,657.01	8,341	38,657.01
2003/04	12,256	0	(9,593.98)	12,256	(9,593.98)
2004/05	12,530	0	(12,050.00)	12,530	(12,050.00)
2005/06	12,977	0	(12,491.00)	12,977	(12,491.00)
2006/07	13,923	0	(13,394.00)	13,923	(13,394.00)
2007/08	13,978	0	(13,518.00)	13,978	(13,518.00)
2008/09	14,585	0	(14,069.00)	14,585	(14,069.00)
2009/10	15,139	0	(14,579.00)	15,139	(14,579.00)

	Resident of Manitoba-Regular			Resident of Manitoba-Conservation			Total: Resident of Manitoba (includes Sr. licenses above)	
Year	Number	Fee $	Revenue $	Number	Fee $	Revenue $	Number	Revenue $
2004/05	44,885	15.89	669,173.65	73,934	10.28	686,978.52	131,349	1,344,102.17
2005/06	44,851	15.89	668,658.39	71,155	10.28	661,127.40	128.983	1,317,294.79
2006/07	46,810	15.89	697,872.90	74,851	10.28	695,393.28	135,584	1,379,872.18
2007/08	48,997	15.89	730,453.33	71,741	10.28	666,559.48	134,716	1,383,494.81
2008/09	50,196	18.89	898,899.44	72,379	13.28	889,604.12	137,160	1774,434.56
2009/10	51,983	18.89	930,843.87	74,239	13.28	912,479.92	141,361	1,828,744.79

	Resident of Canada-Regular			Resident of Canada-Conservation			Total: Resident of Canada	
Year	Number	Fee $	Revenue $	Number	Fee $	Revenue $	Number	Revenue $
1993/94	58,833	12.50	706,624.50	73,227	7.50	512,963.00	132,060	1,219,587.50
1994/95	57,783	12.50	694,044.00	77,716	7.50	544,498.00	135,499	1,238,542.00
1995/96	55,235	12.50	663,355.00	76,844	7.50	538,289.00	132,079	1,201,644.00
1996/97	52,158	12.50	626,742.00	75,081	7.50	526,422.50	127,239	1,153,164.50
1997/98	51,859	14.02	676,760.18	73,603	8.41	546,849.23	125,462	1,223,609.41
1998/99	57,381	14.02	748,238.62	84,000	8.41	623,386.00	141,381	1,371,624.62
1999/00	57,567	14.02	750,690.37	84,938	8.41	630,356.58	142,505	1,381,046.92
2000/01	56,092	14.02	731,276.84	85,256	8.41	632,700.96	141,348	1,363,977.80
2001/02	56,951	14.02	742,473.02	86,223	8.41	639,893.43	143,174	1,382,366.45
2002/03	54,801	14.02	714,456.02	81,629	8.41	605,678.89	136,430	1,320,134.91

Continued...

	Resident of Canada -Regular			Resident of Canada - Conservation			Total: Resident of Canada	
Year	Number	Fee $	Revenue $	Number	Fee $	Revenue $	Number	Revenue $
2003/04	53,995	14.02	703,974.90	82,576	8.41	612,873.16	136,571	1,316,848.06
2004/05	1,906	37.38	69,383.28	8,939	18.69	158,350.91	10,845	227,734.19
2005/06	1,705	37.38	62,055.90	8,495	18.69	150,422.55	10,200	212,478.45
2006/07	1,831	37.38	66,634.78	9,106	18.69	161,263.14	10,937	227,897.92
2007/08	2,101	37.38	76,469.38	9,139	18.69	161,851.91	11,240	238,321.29
2008/09	2,043	40.38	80,495.34	9,626	21.69	199,366.94	11,669	279,862.28
2009/10	2,150	40.38	84,714.00	10,055	21.69	208,258.95	12,205	292,972.95

	Non-Resident of Canada – Regular			Non-Resident of Canada- Conservation			Total: Non-Resident of Canada	
Year	Number	Fee $	Revenue $	Number	Fee $	Revenue $	Number	Revenue $
1993/94	8,770	32.50	280,744.00	20,742	17.50	352,905.50	29,512	633,649.50
1994/95	8,299	32.50	265,668.50	21,906	17.50	372,702.50	30,205	638,371.00
1995/96	7,821	32.50	250,369.50	22,448	17.50	381,856.00	30,269	632,225.50
1996/97	6,840	32.50	218,945.50	21,757	17.50	370,199.50	28,597	589,145.00
1997/98	6,712	37.38	244,557.56	23,406	20.56	458,473.36	30,118	703,030.92
1998/99	7,149	37.38	260,237.62	26,223	20.56	513,312.88	33,372	773,550.50
1999/00	7,192	37.38	261,840.96	27,151	20.56	531,532.56	34,343	793,373.52
2000/01	6,130	37.38	223,166.40	29,959	20.56	586,452.04	36,089	809,618.44
2001/02	6,120	37.38	222,788.60	27,716	20.56	542,490.96	33,836	765,269.56
2002/03	6,075	37.38	221,122.50	26,121	20.56	511,251.76	32,196	732,374.26
2003/04	5,974	37.38	217,466.12	24,952	20.56	488,348.12	30,926	705,814.24
2004/05	4,755	51.40	239,777.00	24,089	28.04	651,714.56	28,844	891,491.56
2005/06	4,271	51.40	215,364.40	23,116	28.04	625,376.64	27,387	840,741.04
2006/07	3,694	51.40	186,241.60	21,353	28.04	577,719.12	25,047	763,960.72
2007/08	3,331	51.40	167,975.40	20,448	28.04	553,163.92	23,779	721,139.32
2008/09	2,773	54.40	148,145.20	17,597	31.04	528,931.88	20,370	677,077.08
2009/10	2,637	54.40	140,908.80	14,801	31.04	444,855.04	17,438	585,763.84

	Total Regular Licenses		Total Conservation Licenses		Total Licenses	
Year	Number	Revenue $	Number	Revenue $	Number	Revenue $
1993/94	67,603	987,368.50	93,969	865,868.50	161,572	1,853,237.00
1994/95	66,082	959,712.50	99,622	917,200.50	165,704	1,876,913.00
1995/96	63,056	913,724.50	99,292	920,145.00	162,348	1,833,869.50
1996/97	58,998	845,687.50	96,838	896,622.00	155,836	1,742,309.50
1997/98	58,571	921,317.74	104,887	1,041,938.17	163,458	1,963,255.91
1998/99	64,530	1,008,476.24	118,923	1,177,013.88	183,453	2,185,490.12
1999/00	64,759	1,012,531.20	121,024	1,203,300.49	185,783	2,215,831.79
2000/01	62,222	954,443.24	123,747	1,258,690.52	185,969	2,213,133.76
2001/02	63,071	965,251.62	122,560	1,222,325.20	185,631	2,187,576.82
2002/03	60,876	935,578.52	116,091	1,155,587.66	176,967	2,091,166.18
2003/04	59,969	921,441.02	119,784	1,091,627.30	179,753	2,013,068.32
2004/05	51,546	978,333.93	119,492	1,484,993.99	171,038	2,463,327.92
2005/06	50,827	946,078.29	115,743	1,424,435.59	166,570	2,370,513.88
2006/07	52,335	950,749.28	119,233	1,420,981.50	171,568	2,371,730.70
2007/08	54,431	974,898.11	115,306	1,381,575.31	169,737	2,356,473.42
2008/09	55,012	1,127,539.98	114,187	1,617,902.94	169,199	2,745,442.92
2009/10	56,770	1,156,466.67	114,234	1,565,593.91	171,004	2,707,482

Note: Revenue figures are net (less vendor's commission).
Resident of Manitoba Senior's Conservation Licenses were introduced in 1998/99.
Starting with the 1999/00 season – angling licenses will be valid from May 1 – April 30.
License sale statistics for the 2010/11 Annual Report will be based on the most recent complete season (i.e. the 2009/10 season).
Resident of Canada, Non Resident of Manitoba Regular and Conservation Licenses were introduced in 2004/05

Table FI.14

Bait Fishing Industry Statistics

	Year				
	2006/07	**2007/08**	**2008/09**	**2009/10**	**2010/11**
No. of licensed bait fish Fishers (frozen & live)	63	64	61	61	64
No. licensed for collection of live bait fish	35	36	32	33	32
No. of leech harvesters	24	23	22	22	21
No. of live bait dealers	56	52	42	47	46
No. of kg of Frozen Bait Fish Produced	65,280	65,900	108,350	103,300	102,710
No. of live bait fish Produced (dozen)	129,380	127,180	93,100	78,720	105,900
No. of kg of Leeches Produced	1,680	1,480	1,500	1,080	1,180
Estimated Gross sales					
Live bait fish	$222,230	$199,070	$141,670	$143,990	$198,690
Frozen bait fish	$473,340	$531,720	$812,960	$805,650	$834,630
Leeches	$78,590	$73,380	$86,300	$59,200	$66,450
Total	$774,160	$804,170	$1,040,930	$1,008,840	$1,099,770

Table FI.15
Manitoba Fish Farming Statistics

		Year				
		2006/07	2007/08	2008/09	2009/10	2010/11
No. of Licensed Operators		29	31	29	29	27
	Species					
No. of Eggs Imported	Rainbow Trout	115,000	27,500	114,000	179,000	0
	Arctic Char	0	0	0	0	10,000
	Brook Trout	0	0	0	0	0
	Other	0	0	0	0	0
No. of Fingerlings Imported	Rainbow Trout	120,000	120,800	125,300	109,500	189,810
	Arctic Char	0	0	0	0	0
	Brook Trout	0	0	0	0	0
	Other	0	0	0	0	0
No. of Eggs/Fry Purchased in Manitoba	Rainbow Trout	0	0	0	0	0
	Arctic Char	214,000	30,000	129,000	140,000	0
	Brook Trout	0	0	0	0	0
	Other	0	0	0	0	0
No. of Fingerlings Purchased in Manitoba	Rainbow Trout	9,300	6,850	22,750	13,000	5,600
	Arctic Char	0	0	43,540	41,580	73,900
	Brook Trout	0	0	200	0	1,000
	Other	0	0	0	0	0
No. of Fingerlings Sold	Rainbow Trout	168,270	170,050	183,800	169,200	86,000
	Arctic Char	0	30,000	43,540	68,370	60,000
	Brook Trout	0	0	0	0	0
	Other	0	0	0	0	0
No. of kg of Fish Sold	Rainbow Trout	10,800	21,100	20,180	7,060	92,200
	Arctic Char	13,180	4,000	30,130	52,110	8,180
	Brook Trout	0	0	35	0	0
	Other	0	20	0	0	0
No. of Fingerling Customers		496	652	803	845	328

Conservation District and Watershed Assistance

The Conservation Districts Program is a partnership between the Province and the participating municipalities to provide for the conservation, control and prudent use of resources through the establishment of conservation districts, under *The Conservation Districts Act*.

The mandate of the program is to promote the sustainable use and management of land, water and related resources on a watershed basis. The Province promotes watershed based partnerships with municipalities to: develop integrated watershed management plans; implement voluntary, incentive based programs and projects to minimize risks to water resources and aquatic ecosystems,; and; empower local conservation district boards to implement measures to protect the ecological integrity and overall health of each watershed for present and future generations.

Manitoba provides grants to support the Conservation Districts Program in areas such as water protection, water management, soil conservation, water storage, wildlife habitat, historic resources and recreation, public education, administration and a variety of other programs that promote sustainable resource management.

In 2010/11, provincial grants totalling $5,615,000 were provided to 18 Conservation Districts, as follows:

Alonsa	$	290,000
Assiniboine Hills	$	229,430
Cooks Creek	$	325,000
East Interlake	$	335,000
Inter-Mountain	$	305,000
Kelsey	$	169,000
Lake of the Prairies	$	190,000
La Salle Redboine	$	210,000
Little Saskatchewan River	$	200,000
Pembina Valley	$	410,000
Seine-Rat River	$	340,000
Swan Lake Watershed	$	212,000
Turtle Mountain	$	345,000
Turtle River Watershed	$	460,000
Upper Assiniboine River	$	300,000
West Interlake	$	125,000
West Souris	$	226,000
Whitemud Watershed	$	755,000
Watershed Planning Grant / Governance Workshop	$	188,570
Total:	$	5,615,000

The annual budgets and activities of the 18 conservation districts are overseen and directed by the Conservation Districts Commission, chaired by the Deputy Minister of Manitoba Water Stewardship. The Conservation Districts Commission is comprised of ten people having a direct relationship with the program (six provincial deputy ministers, one representative from the Manitoba Conservation Districts Association, one representative from the Association of Manitoba Municipalities, and two private citizens). Watershed Planning and Program staff provides assistance to the Conservation Districts in developing sustainable, integrated watershed management plans, administering provincial grant funding, implementing policy for and monitoring the activities of the Conservation District Program.

Table CA.1

25.2(e) Conservation District and Watershed Assistance

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits					
Other Expenditures	5,605		5,615	(10)	1
Less Recoverable from Other Appropriations	(1,165)		(1,165)	-	2
Total Sub-Appropriation	4,440		4,450	(10)	

(1) A portion of the governance and planning workshop highlighted during estimates process was deferred until the 2011-12 fiscal year. The deferral resulted in $9.55 thousand that the Department had committed to lapse.

(2) Funding from the Rural Economic Development Initiative provides a contribution to rural and northern communities to install or upgrade water and sewer services to improve environmental and economic sustainability. It also provides a partial financial recovery for the development of new conservation districts to undertake sustainable economic development projects in the areas of soil and water management and habitat enhancement.

REGULATORY AND OPERATIONAL SERVICES DIVISION

Administration

Staff provide direction and program coordination for the Regulatory and Operational Services Division of Manitoba Water Stewardship so that the optimum development, allocation, and conservation of the water resources of the province are ensured. Staff provide administrative and policy direction, control and monitor funding, monitor efficiency and effectiveness of divisional programs, achieving goals consistent with provincial and departmental policies. Programs are administered within budgeted funding and schedules. The Executive Director sits on the following boards, councils, and commissions:

- International Joint Commission's International Red River Board
- Red River Basin Commission
- Member, Prairie Provinces Water Board
- National Hydrometric Administrator Committee
- Board Member, Partners FOR the Saskatchewan River Basin

Table RS.1
25.3(a) Administration

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	350	5.00	311	39	1
Other Expenditures	577		631	(54)	2
Total Sub-Appropriation	927	5.00	942	(15)	

1. Over expenditure is due to staff turnover allowance resulting from limited vacancies.
2. Under expenditure is due to reduced operating costs resulting from resource management.

Regulatory and Operational Services Division - Flood Forecasting and Flood Response Coordination Branch

Description:

The Flood Forecasting and Flood Response Coordination Branch operates a Hydrologic Forecast Centre that analyses and models hydrologic data and provides a hydrologic reporting, forecasting and warning service to all levels of government and the public. Its purpose is to promote public safety, give direction to emergency response and facilitate optimum operation of water control works such as dams, diversions and floodways for flood damage reduction. The Branch also includes a Development Review component which promotes long-term flood damage reduction by ensuring that developments, subdivisions, permits and crown land sales adhere to provincial land use policies regarding the risk of flooding and erosion. The Branch also performs dam operations for flood control to ensure sufficient supply of water in reservoirs and rivers and suitable lake levels for recreation and fish as well as also contributing climatic information for the design of water control structures. The Branch also performs hydraulic analysis using state-of-the-art hydrodynamic models for flood damage reduction studies and to assess impacts of infrastructure changes such as road and bridge replacements. The Branch operates a provincial network of water level and streamflow gauges and provides hydrometric data in near real time for multiple uses.

Key Results Achieved:

- Spring flood outlooks as well as daily flood reports and forecasts were issued for streams with high water conditions or flooding. These reports were widely distributed for use by all levels of government, emergency management and the public for both spring floods and summer rain generated events.
- River flows and forecasts and lake and reservoir forecasts were provided for operation of floodways, diversions and dams and for deployment of ice breaking equipment for the purpose of flood control and water supply.
- Flash flood watches and warnings were provided for emergency water management and to promote public safety.
- Dams were operated to ensure optimum lake levels for recreation.
- Applications for subdivisions and crown land sales/leases and development permits were reviewed to ensure adherence to land use policies for flood and erosion control.
- Development of a real time weather network continued in collaboration with Weatherbug and the Canadian Wheat Board with financial support from the Emergency Measures Organization and Public Safety Canada.
- The provincial hydrometric network was operated to provide water level and streamflow data in near real time and data was archived for multiple use.
- Real time hydrometric stations were installed at Stephenfield Reservoir, Morden Reservoir, Pilot Mound Reservoir and Mary Jane Reservoir.
- A web site containing information on precipitation and hydrologic conditions was redesigned, maintained and regularly updated.
- Work for Assiniboine and Red River Hydrologic / Hydrodynamic Modelling contracted to consultants
- Responded to numerous calls for hydrometeorological information via e-mail, web site and telephone.
- The efficiency of operational monitoring and forecasting was improved through acquisition of faster computers with remote access.
- New software packages to enhance hydrologic analysis were acquired: MATLAB, VISUAL STUDIO, Watershed Modelling System (WMS), WEB publishing GIS software.

- Succession planning, enhancement and continuity of the Branch was promoted by familiarizing newer staff with procedures and methodologies. The position of Hydrologic Forecast Systems Specialist was refilled.

Activity	Number
Flood Information and Forecast Tables Issued	655
Daily Flood Reports	167
News Releases drafted	97
Spring flood outlooks issued	3
Precipitation Maps prepared	34
Forecasts and Operations of Shellmouth Dam (gate changes)	74
Operations of Whiteshell recreational dams	23
Briefings of the Shellmouth Operation Liaison Committee	14
Media briefings (City and Rural)	33
Briefing Notes Prepared	17
Special Requests from Senior Management to D.M. level	31
Additional Automatic Weather Stations Installed with CWB-JEPP Support	28
Inter-Agency Emergency Management Committee briefings	16
Forecasting procedures developed for watersheds	14
Flood routing procedures developed and updated	5
Coordination sessions with other water management agencies	20
Requests for hydrometeorological information responded to (telephone and e-mail)	2,800
Presentations at conferences and workshops	2
Conference calls and workshops on development and investigations	5
Hydrologic and hydraulic modelling and GIS training courses attended	1
Impacts of Twin Creeks Road bridge design model completed for MIT	1
Calibration of HEC-HMS hydrologic model on Sturgeon Creek	1
Subdivision requests reviewed	555
Crown land sales, leases, permits reviewed	247
Development plans and Zoning By-Law Proposals reviewed	170
Red River Valley Designated Flood Area	
• Dike Mapping and Distribution	417
• Designated Flood Area Permits	60
Licensing Advisory Committee reviews	120
Quarry permits	86
Provincial hydrometric stations operated and data archived to standards	110

Table RS.2
25.3(b) Flood Forecasting and Flood Response Coordination

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	773	8.00	865	(92)	1
Other Expenditures	288		184	104	2
Total Sub-Appropriation	1,061	8.00	1,049	12	

1. Under expenditure is due to vacancies.
2. Over expenditure is due to 2010 Emergency Flood costs and Flood Mitigation Strategy expenses, absorbed by the department.

Regulatory and Operational Services - Water Control Systems Management

The Branch participates in programs, planning exercises, studies, analyses and other activities related to provincial waterways; water control infrastructure such as agricultural drains, flood control works, and dams and reservoirs; erosion control programs; flood preparedness, coordination and response; and various water management issues regarding drainage and flooding.

Key Results Achieved:

- For the provincial waterway infrastructure, multi-year capital planning was undertaken in concert with Manitoba Infrastructure and Transportation. The works include agricultural drainage and other waterways, water crossings, water control structures, dams and diking systems.

- Development proposals that could affect the provincial waterway infrastructure were investigated and authorization permits were issued outlining the terms and conditions for those developments, to ensure the continued safe and effective functioning of the infrastructure.

- Provided technical and engineering input, advice, planning assistance, assessments, and information for integrated watershed management plans and surface water management plans being developed by watershed planning authorities. Similar technical and engineering services were provided to conservation districts for a variety of water management problems and water infrastructure proposals, as well as for the capital works program planning process in conservation districts that manage large, trunk drainage waterway infrastructure.

- Provided engineering and technical support to the Water Control Works and Drainage Licensing Section for evaluating the effects and technical soundness of drainage or other water control works proposed by applicants for licences of works under *The Water Rights Act*.

- Conducted engineering analyses for various water management problems and projects, such as the high lake levels on Shoal Lakes, flooding problems in the Garland River area, assessment of alternatives for the flood control benefits of the Gardenton Floodway, and inputs into the hydraulic stream aspects of the Centre Port development.

- Oversaw the purchase of a second Provincial Amphibex ice breaker and an additional two radio-controlled Bobcat asphalt saws outfitted for use as ice cutters, ownership of which was assumed by Vehicle and Equipment Management Agency. Directed the ice breaking work of the provincially-owned Amphibexes, the ice cutters, and the Ground-Penetrating Radar ice thickness monitoring program in the early spring of 2011. Ice jam mitigation work was done on the Red River at and north of Selkirk, at the Portage Diversion outlet, on the Icelandic River at Riverton, on the Brokenhead River, on the Saskatchewan River and the Carrot River at The Pas, on the Fisher River within the Fisher River and Peguis First Nations, and on the Whitemud River near Westbourne. Continued to work with the North Red Community Water Maintenance Inc. regarding ice jam mitigation work by its Amphibex ice-breaker, by establishing annual ice-breaking work plans and assisting with technical issues and problems. Continued to participate on the organizing committee for the Committee on River Ice Processes and the Environment international conference to be held in Winnipeg in October 2011.

- Continued development of emergency preparedness plans for the Morden and Rivers provincial dams through an engineering consultant contract with SNC-Lavelin Engineering,

and for the Minnedosa and St. Malo provincial dams through a contract with KGS Engineering consultants.

- Continued review and oversight by the Diking Commissioner of the City of Winnipeg's primary diking system.

- Continued participation in the Shoreline Erosion Technical Committee, which reviews proposals for shoreline erosion projects along the shores of Lake Winnipeg, made by local governments and individuals and permitted by the local planning authority. The Committee has members from Manitoba Water Stewardship, Manitoba Conservation, Manitoba Hydro, Fisheries and Oceans Canada, and local planning districts and local municipalities. Initiated plans to expand the geographic scope of the Committee to the balance of southern Manitoba.

- Continued the migration to and maintenance of an electronic database of maps, plans, field/survey information and reports regarding provincially-owned water control infrastructure and water management studies. Requests for information and electronic or paper copies from this database were filled and specialized equipment and supplies were maintained.

- Participated in flood fighting activities in the early spring of 2011, including ice jam monitoring and mitigation, coordination with local authorities, assisting with Red River Floodway operation analyses, and coordination of various activities.

- Developed a comprehensive flood mitigation program, in concert with other departments. Began the implementation of the Individual Flood Protection Initiative, for the flood protection of flood prone homes, farms, and businesses; the Community Flood Protection Program, for the construction of community flood protection works such as dikes; and the Shellmouth Dam Enhancement Project, to complete environmental and engineering assessments of the construction of gates on the dam's spillway.

Table RS.3

25.3(c) Water Control System Management

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	954	12.00	907	47	1
Other Expenditures	139		173	(34)	2
Total Sub-Appropriation	1,093	12.00	1,080	13	

1. Over expenditure is due to staff turnover allowance resulting from full staff complement.
2. Under expenditure is due to resource management.

Regulatory and Operational Services - Office of Drinking Water

The Office of Drinking Water was established to coordinate the activities of the province's drinking water program under *The Drinking Water Safety Act*, with the objectives:

- to administer and enforce *The Drinking Water Safety Act* and the regulations, licences, permits, advisories and orders made under it to assure public drinking water supplies are safe, adequate, aesthetically pleasing and acceptable for present and future residents of, and visitors to, Manitoba;
- to provide a program that employs flexibility and prevention as an effective approach to public health protection;
- to provide guidance, technical expertise, up-to-date information and educational materials about drinking water safety to water suppliers and the public;
- to promote involvement of public, government agencies and departments, communities and private organizations in the decision-making process, and to share expertise and to facilitate co-operative efforts in drinking water programs and policies which ensure safe drinking water; and
- to provide adequate, clear, concise, and publicly visible documentation of results.

Key Results Achieved:

- Reviewed design plans and specifications for 95 projects involving the construction or alteration of public or semi-public water systems. Additionally 25 projects involving the construction or alteration of wastewater collection systems to ensure compliance with guidelines and standards were reviewed.

- Engineering assessment reports for public water systems were reviewed and issued 80 *Drinking Water Safety Act* permits.

- Developed provincial guidelines for determining pathogen reduction achieved by disinfection and filtration technologies to assist with the design, upgrading, assessment and regulation of Manitoba's public water systems.

- Worked with Manitoba Conservation to transfer wastewater collection system engineering, review responsibilities and establish a new approval process.

- Undertook 325 routine and unscheduled on-site inspections of water systems to verify their adequacy and reliability for producing and distributing safe water. This is the first year with rotational inspections for groundwater/satellites and pipelines.

- Monitored the operation of water treatment and distribution works to ensure compliance with Operating Licence conditions.

- Prepared and distributed to owners, 400 public water system report cards (annual audits) bearing on their performance with regard to meeting the conditions outlined in their operating licence.

- Monitored water quality (raw and treated) through the evaluation and reporting of results of laboratory water quality analyses for 462 public water systems and 294 semi-public water systems.

- Hired a Laboratory and Special Contracts Coordinator to administer contracts with laboratories providing analytical services to the Office of Drinking Water.

- Worked cooperatively with the Department of Health (Office of the Chief Medical Officer of Health and Regional Medical Officers of Health) to develop and implement policies and guidelines related to public health and drinking water safety.

- Worked cooperatively with the Department of Health to develop and publish factsheets for water system owners and the general public relating to nitrates, trace elements and turbidity, and to implement a public education campaign encouraging private well owners to test their well water quality regularly for bacteria, nitrates and trace elements.

- Increased the subsidy for private well bacteria testing during the flood season, implemented a public education campaign to increase awareness of the need for water quality testing in flood affected areas, and improved the process for pattern surveillance of bacterial test results from the private well subsidy program.

- Participated in the co-ordination of operator training and certification programs to ensure compliance with the requirements of the Water and Wastewater Certification Regulation administered by Manitoba Conservation.

- Facilitated the provision of on-going educational opportunities (workshops and seminars) for Water and Wastewater System Operators through representation on the Manitoba Water and Wastewater Association Board.

- Provided Operator Training by lecturing at the Red River College's Water and Wastewater School (annual one week program).

- Participated in the development of integrated watershed management plans as they relate to drinking water source protection. Reviewed and provided input into seven new Integrated Watershed Management Plans.

- Provided review and comment on 57 subdivision proposals and planning documents.

- The Office of Drinking Water has established a presence in a federally-maintained database for health professionals, known as the Canadian Network for Public Health Intelligence, and maintained in the network the list of water advisories and the non-potable systems list. The platform is shared by most provinces/territories and allows the users to sort and elaborate information about water advisories by discovering patterns that were not possible before. In Manitoba, the platform is used by dozens of health professionals from all Regional Health Authorities, in addition to the Office of Drinking Water staff.

- A non-potable water system registry program has been developed in cooperation with Manitoba Health. A list of registered non-potable systems is posted on the website.

- Created a committee with members of the Office of Drinking Water and Manitoba Health to develop, review and approve, or recommend changes to policies and procedures including criteria, letters, forms, and applications with regard to non-potable systems.

- Compiled a guideline to assist owners of public water systems with completing a plan for achieving compliance with upcoming standards was made available on the website.

- Provided on-going technical support to Water Plant Operators in need of such service.

- An operating licence was issued to the City of Winnipeg for its new water treatment plant.

- Provided technical support for emergency response services to environmental accidents involving drinking water.

Table RS.4

25.3(d).1 Office of Drinking Water

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	1,433	23.00	1,557	(124)	1
Other Expenditures	808		1,124	(316)	2
Total Sub-Appropriation	2,241	23.00	2,681	(440)	

1. Under expenditure is due to vacancies.
2. Under expenditure is due to lower lab testing rates, related to new laboratory contracts, and resource management.

Regulatory and Operational Services – Water Control Works and Drainage Licensing

This program area ensures that private and municipal drainage, dams and other water control works are constructed, established, operated or maintained in accordance with *The Water Rights Act*.

Key Results Achieved:

The Section has continued progress on implementing the Drainage Regulation Action Plan. This action plan consists of the following:

- Staffing – Water Control Works and Drainage Licensing Section has added a clerk position to support the licensing activities of the 18 Water Resource Officers and 2 Senior Water Resource Officers. The clerk will work in conjunction with 2 Geographic Information Systems Operators within the section to enter file information and track applications through the licensing process.

- Licensing – Water Control Works and Drainage Licensing Section received more than 4150 new applications and concluded over 2300 applications for construction of water control works. Many of the new applications were for minor water control works, which the Water Resource Officers license directly. Application rates for minor water control works increased as there was general acceptance of the approach. More than 400 subdivisions were reviewed by section staff.

- Enforcement – Several offenders were charged and given ministerial orders in various locations across the Province.

- Policy review – A new policy on authorization of minor works was announced. The definition of minor works was expanded to include more low impact works normally conducted by municipalities and allowed for quicker approval of proposed minor works by those that have a history of compliance with *The Water Rights Act*.

- Communications – Presentations regarding the Minor Water Control Works Authorization process were given to the Association of Manitoba Municipalities, various municipal councils and agricultural organizations around the province. Section staff returned to Ag Days in January 2010 to promote changes undertaken.

- Tracking Progress – Data migration into a section database continues. Progress toward the design of a new database that would service a number of sections within Water Stewardship is also underway.

Table RS.5

25.3(d).2 Water Control Works and Drainage Licensing

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	1,686	25.00	1,587	99	1
Other Expenditures	523		537	(14)	2
Total Sub-Appropriation	2,209	25.00	2,124	85	

1. Over expenditure is due to severance payment due to retirement and staff turnover allowance resulting from full staff complement
2. Under expenditure is due to expenditure management.

Regulatory and Operational Services - Water Use Licensing

Water Use Licensing consists of two distinct program areas: the licensing of water withdrawal projects as required under the provisions of *The Water Rights Act* and the licensing of water power (hydroelectric) projects under *The Water Power Act.* The common theme of both programs is the allocation of a valuable provincial Crown resource for a beneficial purpose while ensuring the protection of the interests of all Manitobans and potentially directly affected third parties. The Section includes engineers, hydrogeologists, environmental scientists, engineering technologists, and a database management specialist.

Water Rights Licensing Program:

Working under the authority of *The Water Rights Act*, staff of the Water Rights Licensing program process applications requesting the allocation of surface water or groundwater for municipal, agricultural (i.e. livestock), industrial, irrigation and other purposes. All new projects require the issuance of either a Development Authorization for surface water projects or a Groundwater Exploration Permit for groundwater sourced projects in advance of such projects proceeding to construction. Water rights licences are issued to the applicants subsequent to the satisfactory completion of a project. In addition to these instruments, water rights licensing staff also respond to requests to divert water for short term purposes, for example the hydrostatic testing of petroleum products pipelines, for dust suppression purposes on road construction projects, wetting soil base for road compaction projects, etc. In such cases, a letter of authorization is normally issued rather than a formal licence.

Two staff members are located in Carberry at the Canada-Manitoba Crop Development Centre. Both are directly involved in licensing irrigation projects.

Water Power Regulation and Crown Land Development Review:

Water Power Regulation, Crown Land Reviews and Treaty Land Entitlement Review:

The Water Power Licensing program employs six staff responsible for two important sub-program areas, the most high profile of which is the licensing (or re-licensing) of new and existing water power generating stations and associated water power diversion and/or storage projects. Currently, there are 18 water power projects that have been licensed, some of which were first licensed over 50 years ago. Licensing continues to react to evolving societal expectations regarding issues of stewardship of the resource. To this end, over the past 18 months or so the Section has placed a large number of documents on the water power section of the Departmental web site. The primary tasks of this program area include: (1) the issuance of water power licences; (2) monitoring of licensing terms and conditions; (3) reviewing of *The Water Power Act and Regulation*; (4) conducting of Crown-Aboriginal consultations in accordance with Section 35 of *The Constitution Act* (1982); and, (5) the ongoing development of new compliance and reporting tools based on international best practices.

Short-term extension licences have been issued for the five generating stations on November 8, 2010 granting Manitoba Hydro the right to operate Seven Sisters, McArthur Falls, Pine Falls, Laurie River #1, and Laurie River #2 under the terms and conditions of the respective expired Final Licences. These short-term extension licences expire on September 30, 2015. Several short-term amending licences have also been issued over the past year in response to the re-runnering activity at the Kelsey Generating Station.

Crown-Aboriginal consultations are continuing at many communities prior to the Minister making a final licensing decision on Manitoba Hydro's request for a Final Licence for the Churchill River Diversion Project. Other licensing decisions on the horizon that will require Crown-Aboriginal consultation include: Lake Winnipeg Regulation Final Licence and the proposed Keeyask Generating Station.

The other sub-program is concerned with the assessment and transfer of lands to Canada to fulfill obligations under the Treaty Land Entitlement program and the disposition of applications to develop Crown land parcels located within the Water Power Licence areas and/or Water Power Reserve areas. Although these projects have a short time frame compared to the licensing of water power projects, they are of great importance to the applicant.

Table RS.6
25.3(d).3 Water Use Licensing

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits	1,355	22.00	1,533	(178)	1
Other Expenditures	163		165	(2)	
Total Sub-Appropriation	1,518	22.00	1,698	(180)	

1. Under expenditure is due to vacancies.

WATER STEWARDSHIP INITIATIVES

Water Stewardship Initiatives provides funding for scientific research, innovative policy development, incentives, and projects or activities that improve management or protection of Manitoba's water quality, aquatic ecosystem health, fisheries and includes development and implementation of watershed management and source water protection plans, flood protection and mitigation, and protection of riparian areas and wetlands.

The following initiatives were supported in 2010/11:

- **Development and Implementation of Legislation, Regulations, and Innovative Policies**

  Support was provided to develop innovative policies to protect and restore wetlands including restoring the health of the Province's large marshes and Delta and Netley - Libau.

- **Water Quality Science Protection Initiatives**

  Support was provided for operation of the Lake Winnipeg Research Consortium's ship the *MV Namao*, to undertake water quality and fisheries science on Lake Winnipeg including research into *E. coli* at Lake Winnipeg beaches, to protect Manitoba from transboundary activities that may unacceptably impact Manitoba's water, to support work of the South Basin Lake Winnipeg Mayors and Reeves in its Lake Friendly Product Campaign, plus other similar initiatives, and to undertake analysis to assist in setting long-term water quality objectives for phosphorus and nitrogen for Manitoba's water systems including Lake Winnipeg.

- **Fisheries Science Initiatives**

  Support was provided to programs aimed at conserving fish stocks in Lake Dauphin, to undertake the necessary assessments to be in position to eco-certify the Province's fisheries, and to work towards establishing a new fisheries resource management board on Lake Winnipeg, to support co-management initiatives with Buffalo Point First Nation, and to support fish culture activities at the Whiteshell Fish Hatchery.

- **Hydrological Science Initiatives**

  Support was provided to the operation of approximately 200 hydrometric monitoring sites across Manitoba, operated in partnership with Environment Canada and with Manitoba Hydro.

- **Watershed Planning Initiatives**

  Support was provided to conservation districts to assist with the development of integrated watershed management plans and to implement such plans once developed.

- **Water Control and Risk Management Initiatives**

  Support was provided for the preparation of emergency preparedness and response plans for a number of the province's dams, for the operation of ice jam mitigation equipment such as the Amphibex on the Red River, and for work related to mitigating the effects of flooding.

- **Boards and Committees to Support Citizen Engagement Initiatives**

  Support was provided to the Department's boards and committees including advisory bodies such as the Manitoba Water Council, Lake Manitoba Stewardship Board, the Minister's

special advisor on Lake Winnipeg, the Manitoba Eco-Network's water caucus, plus others as well as those assisting in the engagement of local citizens in water governance such as the Partners FOR the Saskatchewan River Basin.

- **Water Conservation and Drought Management Initiatives**

  Nominal support was initially allocated to assist in the development of drought management plans for Manitoba. However, this work was ultimately covered elsewhere in the Department's budget.

- **Information and Data Management Initiatives**

  Support was provided to assist in upgrading the province's extensive library of orthophotography.

Project	Amount (000s)
Development and Implementation of Legislation, Regulations, and Innovative Policies	$871,000
Water Quality Science Protection Initiatives	$805,000
Fisheries Science Initiatives	$340,000
Groundwater Science Initiatives	$0
Hydrological Science Initiatives	$923,000
Watershed Planning Initiatives	$25,000
Water Control and Risk Management Initiatives	$1,598,000
Boards and Committees to Support Citizen Engagement Initiatives	$185,000
Water Conservation and Drought Management Initiatives	$0
Information and Data Management Initiatives	$19,000
Flood Mitigation (including Ice Jam Prevention and Mitigation)	$1,343,000
Total	$6,109,000

Table WS.1

25.4 Water Stewardship Initiatives

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Salaries and Employee Benefits					
Other Expenditures	5,840		5,840	0	
Total Sub-Appropriation	5,840		5,840	0	

Costs Related to Capital Assets

The department expended the annual amortization costs of all completed assets based on the useful life of each asset. Assets purchased or constructed in 2010/11 were expended at one-half the annual amortization rate. The amortization expense also included the portion of corporate information technology projects attributable to the department.

Table CI.1

25.5(a) General Assets

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
Amortization Expense	273		280	(7)	
Interest Expense	43		46	(3)	
Total Sub-Appropriation	316		326	(10)	

PART B – CAPITAL INVESTMENT

Capital Investment – General Assets provides for the refurbishment and upgrade of facilities and the acquisition of machinery and equipment.

Equipment purchases in 2010/11 totalled $234 and included:

• Aquarius Hydrometric System	$ 206
• Four Stroke Outboard	17
• Snowmobile	11
	$ **234**

Table CI.2
Part B.25 General Assets

Expenditures by Sub-appropriation	Actual 2010/11 $(000)	FTE's	Estimate 2010/11 $(000)	Variance Over/(Under) $(000)	Expl. No.
B.25	234		236	(2)	
Total Sub-Appropriation	234		236	(2)	

Sustainable Development Activities and Accomplishments

Manitoba Water Stewardship exemplifies commitment to the Sustainable Development Principles of Stewardship. The department, in its Vision, Mission and Values statements, articulates clearly its commitment to ensuring today's decisions are balanced with tomorrow's consequences, recognizing that Manitobans are caretakers of water resources for the benefit of present and future generations.

Activities of Manitoba Water Stewardship that incorporate or apply Sustainable Development Principles and Guidelines:
The Water Protection Act was proclaimed in force on January 1, 2006, the first Act of its kind in Canada. *The Water Protection Act* represents the single most significant action of the Department to ensure the Principles and Guidelines of Sustainable Development are incorporated into and applied in its everyday operations. *The Water Protection Act* embodies and articulates Sustainable Development Guidelines and Principles in establishing the legislative framework around which Manitoba's water resources will be protected. It provides a key legislative and policy mandate for the department.

SUSTAINABLE DEVELOPMENT PRINCIPLES:
1. Integration of Environmental and Economic Decisions:

- *Economic decisions should adequately reflect environmental, human health and social effects.*
- *Environmental and health initiatives should adequately take into account economic, human health and social consequences.*

Water Stewardship staff reviewed proposed licences and permits under *The Environment Act*, and *The Water Rights Act;* municipal and planning district development plans and amendments; and municipal subdivisions to ensure the integrity and sustainability of Manitoba's drinking water, commercial water resources, fisheries, water quality, wetlands, and riparian areas. Ensuring that Manitobans and their investments are protected from water related hazards and shortages are an important component of the licensing and review process.

2. Stewardship:

- *Water and fish resources should be managed for the equal benefit of present and future generations.*
- *Manitobans are caretakers of our water and fish resources for the benefit of present and future generations.*

The department provides a strong stewardship function in managing drinking water systems throughout Manitoba for today and into the future. This is accomplished through regulatory development and enforcement, emergency investigations, monitoring, technical support, testing services and operator guidance and support.

The Department is responsible for managing and protecting the quality and quantity of ground water and surface water. This is accomplished through regulatory development and enforcement; surface and groundwater quality and quantity monitoring; emergency investigations; ongoing programs, studies and projects; provision of technical advice.

The maintenance and operation of drainage systems and activities, dams and dikes is a critical stewardship function of Water Stewardship. The proper construction and operation of infrastructure for the benefit of individuals, communities, industry and the environment is essential.

Working together with irrigators, high levels of compliance on water use reporting has occurred. This ensures reliable water use records and an enhanced ability to manage these resources sustainably into the future.

3. Shared Responsibility and Understanding:

- *Manitobans should acknowledge responsibility for sustaining water and fish resources with each being accountable for decisions and actions in a spirit of partnership and cooperation.*
- *Manitobans share a common economic, physical and social environment.*
- *Manitobans should understand and respect differing economic and social views, values, traditions and aspirations.*
- *Manitobans should consider the aspirations, needs and views of the people of the various geographical regions and ethnic groups in Manitoba, including aboriginal peoples, to facilitate equitable management of Manitoba's common resources.*

Manitoba Water Stewardship shares the responsibility to provide safe drinking water with water system owners and operators across Manitoba. This cooperation is demonstrated through outreach activities, presentations, and feedback on annual water system operations.

Management of water control systems (waterway and drainage systems, dams, crossings, etc.) affects the well-being and sustainability of many communities and individuals. Sharing technical expertise with municipalities and conservation districts, collaborating with local technical advisory groups and facilitating cost-shared developments are examples of the department's cooperative efforts.

Manitoba Water Stewardship continues to work with various stakeholders in the establishment of basin, watershed and aquifer management plans, and the provision of administrative assistance to several management advisory boards.

The department relies on water level and stream flow data collected under the Canada-Manitoba Hydrometric Agreement for operation of water control works, flood forecasting and water management investigations and hydrologic studies.

The department continues to work with First Nations, and Métis communities to develop fisheries management approaches consistent with constitutional obligations.

Regional staff consulted with West Regional Tribal Council, other First Nations, and Métis communities concerning additional conservation measures for the walleye stocks of Dauphin Lake over the course of the year. During the consultation process Manitoba was informed of the importance of the spring fishery to Aboriginal communities. Several proposed management options were reviewed.

4. Prevention:

- *Manitobans should anticipate, and prevent or mitigate, significant adverse economic, environmental, human health and social effects of decisions and actions, having particular careful regard to decisions whose impacts are not entirely certain but which, on reasonable and well-informed grounds, appear to pose serious threats to the economy, the environment, human health and social well-being.*

Existing ongoing licensing systems for water allocation, development and drainage all enhance the ability of Water Stewardship to anticipate, prevent or mitigate significant adverse effects of activity on drinking water, commercial water sources, fisheries, wetlands and riparian areas.

Water Stewardship continued to work toward protection of endangered aquatic species by working with the federally appointed Committee on the Status of Endangered Wildlife in Canada

and cooperating with the federal Department of Fisheries and Oceans to develop recovery/ management plans to address aquatic species of concern under the federal *Species at Risk Act*.

The Department implemented a cooperative, proactive strategy to prevent the accidental introduction of zebra mussels and other aquatic invasive species to Manitoba. In 2010 and early 2011, efforts to heighten public awareness of zebra mussels and other aquatic invaders were strongly supported with additional educational material, an aquatic invasive species reporting hotline, and attendance at numerous public events.

The department conducted physical, chemical and biological sampling on Lake Winnipeg. Information collected will help to describe short and long term changes and allow us to better understand nutrient and algae dynamics in Lake Winnipeg. Three scientific cruises on Lake Winnipeg are completed each year in spring summer and fall with the cooperation of the Lake Winnipeg Research Consortium, Environment Canada and others. The department leads the winter sampling efforts on Lake Winnipeg in both the north and south basins.

The department operates an ambient monitoring network on major streams, lakes and recreational beaches, assisted by volunteers, regional personnel and organizations, such as conservation districts. Over 75 sites across Manitoba were regularly monitored for up to 100 chemical parameters, and 60 beaches were monitored, with information posted on the department's website.

Over 86% of public drinking water systems abide by newly established requirements for all utilities to apply for, and comply with an operating licence. Within this licence are operating and monitoring requirements to minimize any potential risk to public health resulting from the operation of the facility. Further to this, to mitigate long term adverse economic impacts, utilities are required to carry out an engineering assessment of their water treatment works once every five years. The intent of the assessment is to identify deficiencies in the infrastructure. The utility is then required to develop a compliance plan to address the deficiencies in a timely manner to ensure the public health is protected and satisfactorily address the economic impact of the required work.

Manitoba's 18 conservation districts offer over 40 preventative best management practice incentive programs to support sustainable land use and water management protecting thousands of hectares of sensitive lands and waters.

5. Conservation and Enhancement:

- *Maintain the ecological processes, biological diversity and life-support systems of the environment.*
- *Harvest renewable resources on a sustainable yield basis.*
- *Make wise and efficient use of renewable and non-renewable resources.*
- *Enhance the long-term productive capability, quality and capacity of natural ecosystems.*

The present water allocation licensing process and associated hydrological yield analysis has resulted in significant numbers of applications being placed on permanent hold on aquifers where sustainable yields are fully allocated.

In annually permitting and licensing water use and fish harvest, the department ensures that the sustainability of those resources is not compromised.

A Riparian Easements Delivery Program continued to operate in partnership with Manitoba Habitat Heritage Corporation to protect water sensitive lands, including wetlands, riparian areas and fragile landscapes, through Conservation Easement Agreements.

Conservation District Secretariat Staff worked with 18 conservation districts in the development and delivery of water and soil conservation programs and projects.

The Fisheries Enhancement Fund has funded over 300 projects directed at enhancing fish populations and their habitat as well as funding educational opportunities. In 2010/11, the Fisheries Enhancement Fund funded 36 projects totalling $810,500.

6. Rehabilitation and Reclamation:

- *Endeavour to repair damage to or degradation of the environment.*
- *Consider the need for rehabilitation and reclamation in future decisions and actions.*

The department continued to provide co-ordination and planning assistance for a number of watershed/stream restoration projects in Manitoba. An integrated planning approach joins local stakeholder groups and agencies in restoring the health and functions of watersheds. The Department continued to provide planning and support services for 17 watershed plan processes as required through provisions of *The Water Protection Act* including: Icelandic River-Washow Bay, La Salle River, Seine River, Arrow/Oak River, Little Saskatchewan River, Shell River, and Birdtail River.

Public consultations were initiated for the West Lake and Willow Creek integrated watershed plan processes. A memorandum of understanding was signed with the Cooks Creek Conservation District to initiate the integrated watershed management planning process for the Cooks-Devils Creek watersheds, bringing the total number of plans approved for development to 24.

The Wetland Restoration Incentive Program was continued as part of the province's climate change adaptation strategy, to help restore the condition of wetlands, improve water quality, and reduce greenhouse gas emissions through a one-time payment and Conservation Agreement to landowners.

7. Global Responsibility:

- *Manitobans should think globally when acting locally, recognizing that there is economic, ecological and social interdependence among provinces and nations, and working cooperatively, within Canada and internationally, to integrate economic, environmental, human health and social factors in decision-making while developing comprehensive and equitable solutions to problems*

Manitoba Water Stewardship participates in the Canadian Council of Ministers of the Environment's through its Environmental Planning and Protection Committee, Water Agenda Development Committee and Water Quality Task Group. The department also supports the work of a number of the subcommittees associated with these Committees and Task Groups including those related to Water Valuation, Groundwater, Nutrients, Monitoring for Climate Change, and Water Quality Monitoring and Reporting.

The department also participates in national level committees to ensure the Canadian Drinking Water Quality Guidelines benefit Manitobans as well as all Canadians.

The department also participates in national level committees to ensure the Canadian Drinking Water Quality Guidelines and the Canadian Recreational Water Quality Guidelines benefit Manitobans as well as all Canadians.

Participation in watershed and basin planning ensures that drinking water issues that transcend local, regional and provincial boundaries are addressed.

The department participated in and supported the Red River Basin Commission dedicated to the environmental, economic and social sustainability of the Red River Valley.

Manitoba Water Stewardship continued its partnership agreement with Natural Resources Canada to implement the National Hydrographic Network.

The department participates on a number of inter-provincial and international boards and committees directed at the sustainable management of shared waters within the Hudson Bay Drainage Basin including the Prairie Provinces Water Board, the Red River Basin Commission, the Lake of the Woods Control Board, the International Red River Board, the International Souris River Board, and the Western Water Stewardship Council.

SUSTAINABLE DEVELOPMENT GUIDELINES

1. Efficient Uses of Resources:

- *Encouraging and facilitating development and application of systems for proper resource pricing, demand management and resource allocation together with incentives to encourage efficient use of resources.*
- *Employing full-cost accounting to provide better information for decision makers.*

Manitoba Water Stewardship participated on a sub-committee of the Canadian Council of Ministers of the Environment on Water Valuation identifying economic instruments and demand side management to support the efficient use of water.

2. Public Participation:

- *Establishing forums which encourage and provide opportunity for consultation and meaningful participation in decision-making processes by Manitobans.*
- *Endeavouring to provide due process, prior notification, and appropriate and timely redress for those adversely affected by decisions and actions.*
- *Striving to achieve consensus amongst citizens with regard to decisions affecting them.*

Technical advisory committees and community meetings were held to work towards alleviating flooding on several First Nations lands. Such forums facilitated the identification of solutions that would sustain communities into the future.

Discussions progressed with four new water planning authorities to develop, in consultation with stakeholders, watershed management plans for the protection and management of surface and ground water resources. Manitoba Water Stewardship staff supported ongoing integrated watershed management plans with seven water planning authorities.

Manitoba Water Stewardship established the Manitoba Water Council to provide Ministerial advice on policies, programs, plans and legislation needed to achieve the department's vision of "the best water for all life and lasting prosperity". The Council will help build a broad-based consensus among Manitobans on sustainable solutions for water protection and water management.

The Shellmouth Dam and Other Water Control Works Management and Compensation Act was presented and passed in legislature. This Act works to create operating guidelines for the dam, and ensures public participation through the establishment of an advisory committee to provide advice to the Minister about water control works.

3. Access to Information:

- *Encouraging and facilitating the improvement and refinement of economic, environmental, human health and social information.*
- *Promoting the opportunity for equal and timely access to information by all Manitobans.*

Manitoba Water Stewardship provides information covering all aspects of the water resources to the public through the department's website. Specific information is provided through open houses and public meetings.

Water Stewardship's Office of Drinking Water made data on public water system compliance with up-coming water quality standards available to the general public through the department website, and worked with the Department of Health to publish factsheets relating to standards for trihalomathanes, turbidity, protozoa (*Giardia* and *Cryptosporidium*), nitrates and trace elements. A process was initiated in cooperation with the Department of Health to issue water quality advisories to water system users affected by exceedances of these standards.

Departmental staff participated in *Manitoba Envirothon* by working with the test-writing committee, preparing questions, and assisting in the field day and oral components. *Envirothon* is an annual Olympic-style academic and environmental program. High school students (Senior I to IV) are tested in four discipline areas (aquatics, forestry, soils, and wildlife) and the annual theme.

Manitoba Water Stewardship continued to work in partnership with Manitoba Education and volunteer teachers to develop, expand, and deliver on-line, grade-specific lessons and activities that promote sustainable fisheries development focused on the Kindergarten to Senior IV Science curriculum.

A total of 65 flood reports were issued in 2008 and 2009 for various areas in Manitoba. These reports were also posted on the department's website.

The Whiteshell Fish Hatchery Visitor Centre gave tours to approximately 5,000 people from June through the September long weekend. Interpretive exhibits include information on species reared at the hatchery, life stages of fish, how water is use, a history of the hatchery, aquatic invasive species, and ecosystem interaction.

Daily updates on recreational water quality at beaches across Manitoba were provided on the Department's web site. News releases were issued every Friday during the recreational season to provide information on recent test results, advisory signs, and how Manitobans can protect the beach and themselves.

4. Integrated Decision Making and Planning:

- *Encouraging and facilitating decision-making and planning processes that are efficient, timely, accountable, and cross-sectoral and which incorporate an inter-generational perspective of future needs and consequences.*

Manitoba Water Stewardship continued to develop the template and model for Integrated Water Planning and Management in Manitoba. This approach will ensure the integration of decision making and management of land, water and related resources.

Manitoba Water Stewardship partnered with conservation districts to initiate public consultations for four watershed planning processes, and signed nine additional memorandums of understanding to initiate the integrated watershed management planning process in 10 watersheds.

In 2010/11, provincial grants totalling $5.615 million were provided to 18 conservation districts to support the Conservation Districts Programs in areas such as water management, soil

conservation, water storage, wildlife habitat, preservation of historic resources, recreation, public education, administration and other programs that promote sustainable resource management.

5. Waste Minimization and Substitution:

- *Encouraging and promoting the development and use of substitutes for scarce resources where such substitutes are both environmentally sound and economically viable.*
- *Reducing, reusing, recycling and recovering the products of society.*

WaterSmart Manitoba is a provincial water conservation initiative that will help Manitobans to become more efficient at conserving our water resource for future generations. Initially focusing on single family residential households, the initiative will be built over a multi-year timeframe to include other water use sectors such as municipal and commercial.

6. Research and Innovation:

- *Means encouraging and assisting the researching, development, application and sharing of knowledge and technologies which further our economic, environmental, human health and social well-being.*

The department supported research on Lake Winnipeg through a grant to the Lake Winnipeg Research Consortium for operation of *The Namao* and in kind contributions.

The Water Stewardship Fund provides $350,000 in grants annually to develop, implement, and promote activities in research that maintain or improve the quality and availability of Manitoba's water.

The Office of Drinking Water established a Research and Program Support Unit focusing on drinking water issues specific to Manitoba. Research was initiated on protozoa, viruses and disinfection-by-products, including haloacetic acids.

REVENUE and EXPENDITURE SUMMARIES

Table RE.1

Reconciliation Statement

DETAILS	$(000) 2010/11 ESTIMATES
Printed Estimates of Expenditure 2010/11	$33,427
Allocation from Enabling Vote • Water Stewardship Initiatives	144
Allocation from Internal Service Adjustment • Amortization and Interest	31
2010/11 ESTIMATES	$33,602

Table RE.2

Revenue Summary By Source

For the year ended March 31, 2011 with comparative figures for the previous fiscal year

Actual 2009/10	Actual 2010/11	Increase (Decrease)	Source	Actual 2010/11	Estimate 2010/11	Variance	Expl. No.
			OTHER REVENUE:				
414	245	(169)	(a) Fisheries Fees and Sundry	245	307	(62)	1
2,825	2,673	(152)	(b) Licence Sales by Vendors	2,673	3,091	(418)	2
114,745	114,850	105	(c) Water Power Rentals	114,850	110,000	4,850	3
175	184	9	(d) Water Resources Sundry	184	88	96	4
0	0	0	(e) Drinking Water Fees	0	0	0	
0	0	0	(f) Reconciliation (Reorg)	0	0	0	
118,159	117,952	(207)	Subtotal	117,952	113,486	4,466	
			GOVERNMENT OF CANADA:				
0	0	0	Fisher River Flood Protection	0	0	0	
0	0	0	Subtotal	0	0	0	
118,159	**117,952**	**(207)**	**Total**	**117,952**	**113,486**	**4,466**	

Explanation Number:

1. Reduced contribution from Manitoba Hydro for Grand Rapids Hatchery support and lower revenues from bait and commercial fishing licences and sale of confiscated fish.

2. Lower sales volume of angling licences due to late spring and high water conditions throughout the summer.

3. Higher revenues due to better water supply conditions and greater demand for electricity.

4. More applications received for licensing minor drainage works due to greater awareness of farm drainage and the encouragement of drainage licence purchases. Wet conditions in the summer of 2010 have also underscored drainage issues.

Table RE.3

Expenditure Summary

For fiscal year ended March 31, 2011 with comparative figures for the previous year.

Estimate 2010/11	Appropriation	Actual 2010/11	Actual 2009/10	Increase (Decrease)	Expl No.
	25-1 Administration and Finance				
37	(a) Minister's Salary	37	46	(9)	
	(b) Executive Support				
532	Salaries and Employee Benefits	531	534	(3)	
167	Other Expenditures	141	97	44	1
	(c) Administration & Financial Services				
317	Salaries and Employee Benefits	304	361	(57)	2
30	Other Expenditures	27	41	(14)	
	(d) Information Technology Services				
349	Salaries and Employee Benefits	278	348	(70)	3
15	Other Expenditures	16	14	2	
1,447	Total 25-1	1,334	1,441	(107)	
	25-2 Ecological Services				
	(a) Administration				
167	Salaries and Employee Benefits	191	186	5	
52	Other Expenditures	62	52	10	
15	Grant Assistance	15	13	2	
166	Minor Capital	85	148	(63)	4
400	Total 25-2a	353	399	(46)	
	(b) Planning and Coordination				
1,861	Salaries and Employee Benefits	1,562	1,613	(51)	5
306	Other Expenditures	396	515	(119)	6
2,167	Total 25-2b	1,958	2,128	(170)	
	(c) Water Science and Management				
	(1) Administration				
209	Salaries and Employee Benefits	173	210	(37)	
142	Other Expenditures	135	142	(7)	
	(2) Groundwater Management				
996	Salaries and Employee Benefits	1,002	1,032	(30)	
523	Other Expenditures	399	477	(78)	7
	(3) Surface Water Management				
592	Salaries and Employee Benefits	667	639	28	
125	Other Expenditures	115	135	(20)	
	(4) Water Quality Management				
1,371	Salaries and Employee Benefits	1,164	1,286	(122)	8
722	Other Expenditures	578	816	(238)	9
4,680	Total 25-2c	4,233	4,737	(504)	
	(d) Fisheries Branch				
	(1) Administration				
118	Salaries and Employee Benefits	115	114	1	
231	Other Expenditures	252	274	(22)	
	(2) Fish Hatchery and Fish Culture				
767	Salaries and Employee Benefits	687	791	(104)	10
74	Other Expenditures	73	160	(87)	11

Estimate 2010/11	Appropriation	Actual 2010/11	Actual 2009/10	Increase (Decrease)	Expl No.
	(3) Sport and Commercial Fishing Management				
723	Salaries and Employee Benefits	807	784	23	
64	Other Expenditures	63	68	(5)	
	(4) Regional Fisheries Resources				
989	Salaries and Employee Benefits	1,087	1,063	24	
179	Other Expenditures	177	232	(55)	
410	(5) Northern Fisherman's Freight Assistance	410	410	-	
850	(6) Fisheries Enhancement Initiative	818	833	(15)	
4,405	Total 25-2d	4,489	4,729	(240)	
	(e) Conservation District and Watershed Assistance				
5,615	Conservation District and Watershed Assistance	5,605	5,515	90	12
(1,165)	Less: Recoverable from Rural Economic Development Initiative	(1,165)	(1,165)	0	
4,450	Total 25-2e	4,440	4,350	90	
16,102	Total 25-2	15,473	16,343	(870)	
	25-3 Regulatory and Operational Services				
	(a) Administration				
311	Salaries and Employee Benefits	350	458	(108)	13
631	Other Expenditures	577	627	(50)	
	(b) Flood Forecasting and Flood Response Coordination				
865	Salaries and Employee Benefits	773	727	46	
184	Other Expenditures	288	327	(39)	
	(c) Water Control Systems Management				
907	Salaries and Employee Benefits	954	827	127	14
173	Other Expenditures	139	182	(43)	
	(d) Regulatory Services				
	(1) Office of Drinking Water				
1,557	Salaries and Employee Benefits	1,433	1,302	131	15
1,124	Other Expenditures	808	1,236	(428)	16
	(2) Water Control Works and Drainage Licensing				
1,587	Salaries and Employee Benefits	1,686	1,639	47	
537	Other Expenditures	523	512	11	
	(3) Water Use Licensing				
1,533	Salaries and Employee Benefits	1,355	1,386	(31)	
165	Other Expenditures	163	184	(21)	
	(e) Waterway Planning and Operational Services Support				
398	Waterway Planning and Operational Services Support	272	286	(14)	

Estimate 2010/11	Appropriation	Actual 2010/11	Actual 2009/10	Increase (Decrease)	Expl No.
(85)	Less: Recoverable from Sustainable Development Innovations Fund	(85)	0	(85)	17
9,887	Total 25-3	9,236	9,693	(457)	
	Water Stewardship Initiatives	5,840	4,558	1,282	18
5,840	Total 25-4	5,840	4,558	1,282	
	25-5 Costs Related to Capital Assets				
	(a) General Assets				
280	(1) Amortization Expense	273	239	34	
46	(2) Interest Expense	43	43		
326	Total 25-5	316	282	34	
33,602	**TOTAL EXPENDITURES**	32,199	32,317	(118)	
236	**B.25 Capital Investments – General Assets**	234	102	132	19
236	**TOTAL CAPITAL INVESTMENT**	234	102	132	

Explanation Number:

1. Higher travel, accommodation and employee training costs in 2010/11
2. Vacancy management in 2010/11
3. Vacancy management in 2010/11
4. Year-over-year differences in timing and type of minor capital purchases
5. Year-over-year variance in vacancies and positions filled
6. Year-over-year difference in Water Smart grant payments and lower general operating expenses due to vacancies
7. Reduced lab costs and well drilling project costs, related to new laboratory contracts
8. Year-over-year variance in vacancies and positions filled
9. Reduced lab costs related to testing quality of Manitoba's surface water in 2010/11
10. Vacancy management in 2010/11
11. Reduced Fish Hatchery/Fish Culture program activities in 2010/11 due to redirection of some programs to Water Stewardship Initiatives
12. Conservation District program increase for development and expansion of new conservation district activities to promote Sustainable Resource Management
13. Reduced seasonal support for various Regulatory Services summer projects
14. Vacancies filled in 2010/11
15. Vacancies filled in 2010/11
16. Reduced lab testing rates, related to new laboratory contracts
17. 2010/11 cost recoveries from Sustainable Development Innovations Fund for research and consulting operational support
18. Year-over-year difference in Water Stewardship Initiatives project activities
19. Year-over-year differences in timing and value of assets purchased

Table RE.4
FIVE YEAR EXPENDITURE AND STAFFING SUMMARY BY MAIN APPROPRIATION
for the fiscal years ended March 31, 2007 to March 31, 2011*

Main Appropriation		2006/2007 FTEs	2006/2007 $(000)	2007/2008 FTEs	2007/2008 $(000)	2008/2009 FTEs	2008/2009 $(000)	2009/2010 FTEs	2009/2010 $(000)	2010/2011 FTEs	2010/2011 $(000)
25-1	Administration and Finance	16.00	1,161	16.00	1,467	15.00	1,331	15.00	1,441	15.00	1,334
25-2	Ecological Services	108.19	13,557	112.19	14,719	115.06	16,760	114.06	16,343	114.06	15,473
25-3	Regulatory and Operational Services	74.12	5,402	85.12	7,533	93.00	8,542	93.00	9,693	95.00	9,236
25-4	Water Stewardship Initiatives		4,741		4,837		5,720		4,558		5,840
25-5	Costs Related to Capital Assets		244		278		269		282		316
	Total Appropriations (BA25)	**198.31**	**25,105**	**213.31**	**28,834**	**223.06**	**32,622**	**222.06**	**32,317**	**224.06**	**32,199**

* Adjusted figures reflect historical data on a comparable basis in those appropriations affected by re-organization, during the years under review.

MANITOBA WATER STEWARDSHIP – Performance Reporting Table

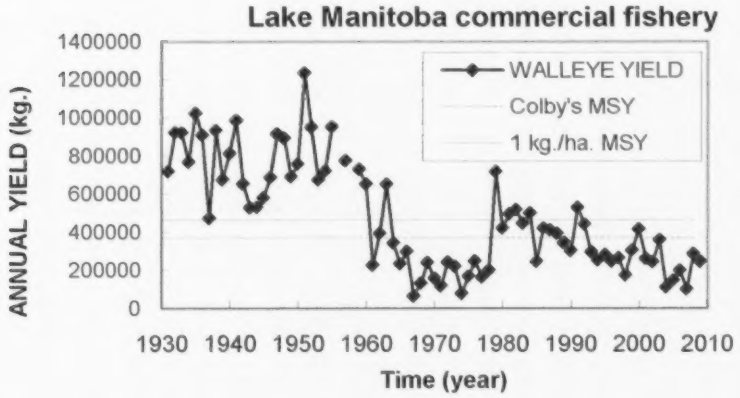
The following section provides information on key performance measures for the department for the 2009-10 reporting year. All Government of Manitoba departments include performance measures in their Annual Reports to complement the financial results and provide Manitobans with meaningful and useful information about government activities and their impact on the province and its citizens.

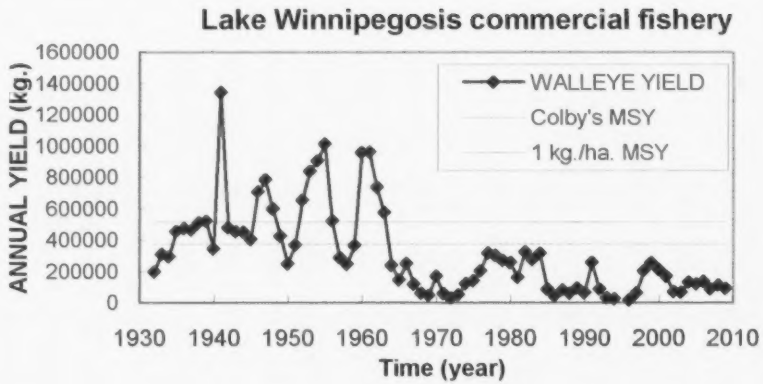
For more information on performance reporting and the Manitoba government, visit www.manitoba.ca/performance.

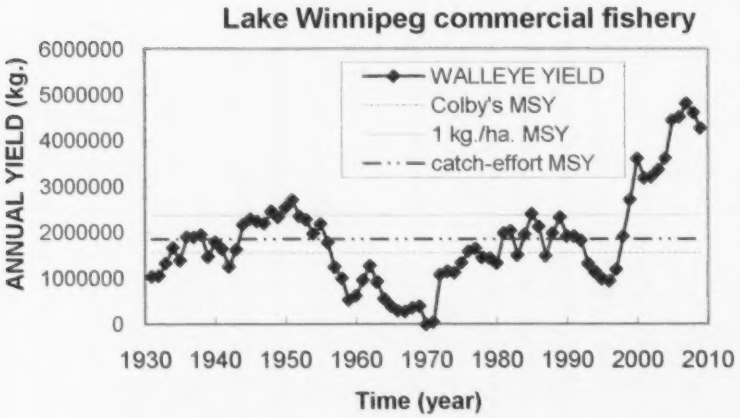
Your comments on performance measures are valuable to us. You can send comments or questions to mbperformance@gov.mb.ca.

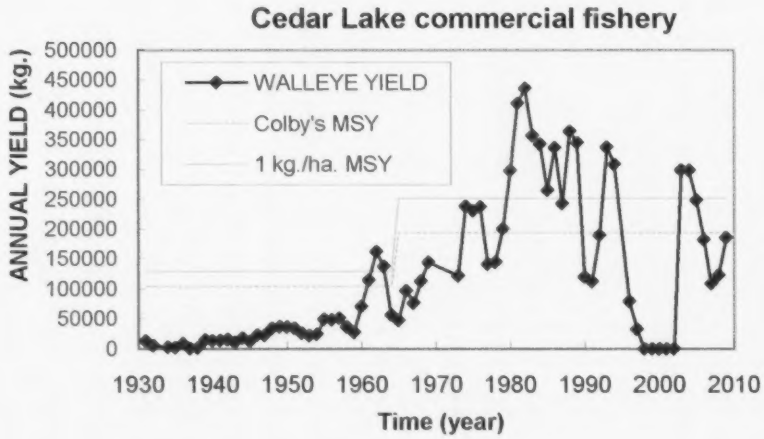
What is being measured and how?	*Why is it important to measure this?*	*Where are we starting from?*	*What is the most recent available value for this indicator?*	*What is the trend over time for this indicator?*	*Comments/recent actions/report links*
The status of fish stocks is being measured by comparing the commercial production of the most economically valuable fish species against Maximum Sustainable Yield (MSY). These comparisons are made for four large commercial fisheries: Lake Winnipeg, Lake Manitoba, Lake Winnipegosis and Cedar lake.	It is important to measure the status of these fish stocks because they are an indicator of both aquatic ecosystem health AND economic opportunity for fishers. It is important to track production (i.e. annual species catch – see graphs, below) against lake-specific MSY, because harvest of consistently valuable species is reflective of stock abundance. MSY and annual production contribute to the establishment of quotas for each lake.	The baseline used for management purposes is MSY and historic annual catch.	See walleye production & MSY graphs, below. Current walleye and mixed species quotas are: **Lake Winnipegosis** – 263,320 kg (walleye) **Lake Manitoba** – 907,200 kg (walleye, sauger) **Cedar Lake** – 496,600 kg (walleye, sauger, goldeye, whitefish) – tolerance: not more than 300,000 can be walleye **Lake Winnipeg** – 6,520,000 kg (walleye, sauger, whitefish)	**Lake Winnipegosis** – production has experienced long term decline. **Lake Manitoba** – production has experienced long term decline. **Cedar Lake** – recent increases in production reflect five-year closure due to decreased fishery. **Lake Winnipeg** – production at record levels but high nutrients and invasive species leaves concerns for stability.	**Lake Winnipegosis** – The Department continued to implement rehabilitation strategies as part of overall stock recovery efforts. **Lake Manitoba** – The Department is undertaking community meetings to solicit resource user input into the development of a fisheries management plan. **Cedar Lake** – Recovery of fish stocks is not complete. Fishery continues to be adjusted, in accordance with the management plan implemented in June 2006. **Lake Winnipeg** – Monitoring efforts on Lake Winnipeg will continue because of available staff resources are now in place. A *Lake Winnipeg Quota Review Task Force* was established to conduct a biological review.

Commercial production and maximum sustainable yield (MSY) on four large Manitoba fisheries.

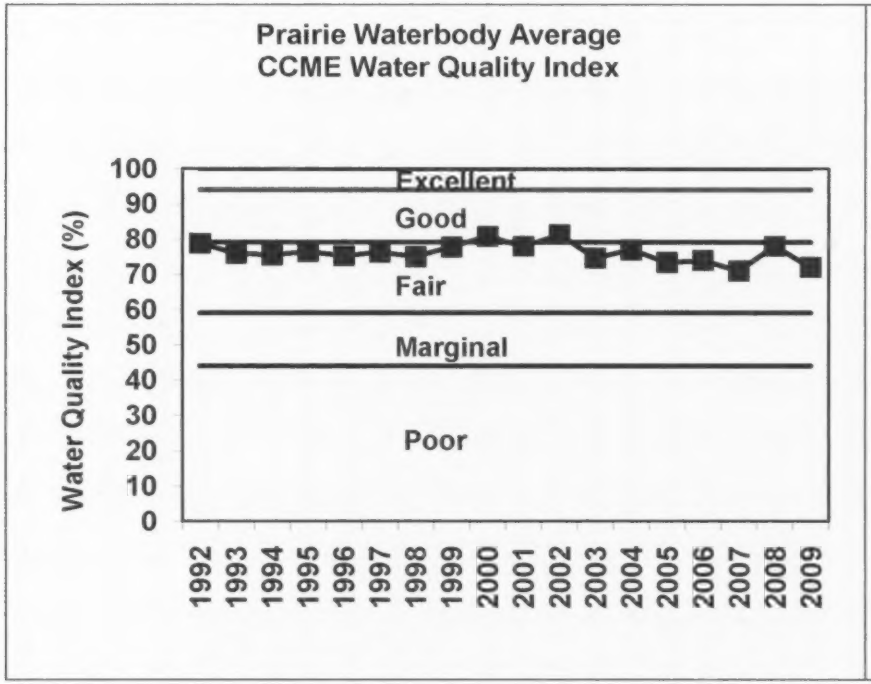








What is being measured and how?	Why is it important to measure this?	Where are we starting from?	What is the most recent available value for this indicator?	What is the trend over time for this indicator?	Comments/recent actions/report links
Water quality in Manitoba, by assessing water quality data using the CCME (Canadian Council of Ministers of the Environment) Water Quality Index.	It is important to measure water quality because we want to protect drinking water, fish and other aquatic life, recreation, and other important water uses.	Water quality has been tested at many rivers, streams and lakes since the early 1970s. The Water Quality Index has been calculated for 40 to 50 sites since 1992.	The latest data available is for 2009. Within the Prairie Ecozone, the CCME Water Quality Index Value was 72 or of "fair" quality. Within the Boreal Plains, the CCME Water Quality Index Value was 83 or of "good" quality. Within the Boreal Shield Ecozone, the CCME Water Quality Index Value was 99 or of "good" quality.	The Water Quality Index in Manitoba has been stable since 1992 (see graphs below).	Work is underway to protect, maintain and improve water quality in Manitoba including measures to reduce nutrient loading to waterways. For example, in 2010/11, Water Stewardship worked with manufactures, distributors and retailers to improve the availability of low phosphorus lawn fertilizers and automatic dishwashing detergents, and worked with golf courses to prepare and register nutrient management plans. Since development and drainage can also impact water quality, Water Stewardship recommends mitigation measures to minimize impacts. Mitigation measures recommended during 2010/11 include requirements for nutrient removal for new or expanding wastewater treatment facilities serving the food processing industry, large communities and those discharging to sensitive areas including in provincial parks.


Prairie Waterbody Average
CCME Water Quality Index
Water Quality Index (%)
100
90
80
70
60
50
40
30
20
10
0
Excellent
Good
Fair
Marginal
Poor
1992
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1994
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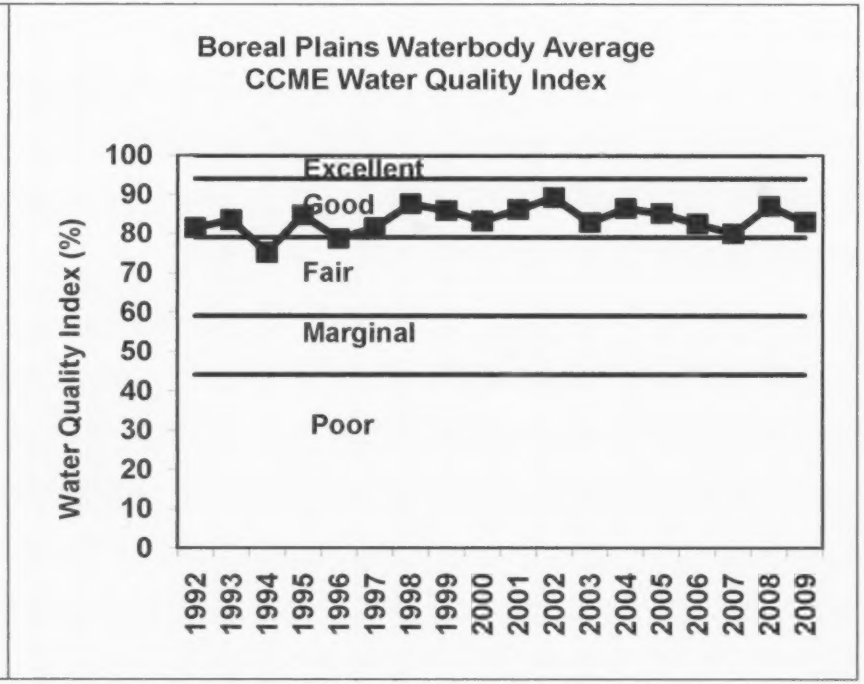
Boreal Plains Waterbody Average
CCME Water Quality Index
Water Quality Index (%)
100
90
80
70
60
50
40
30
20
10
0
Excellent
Good
Fair
Marginal
Poor
1992
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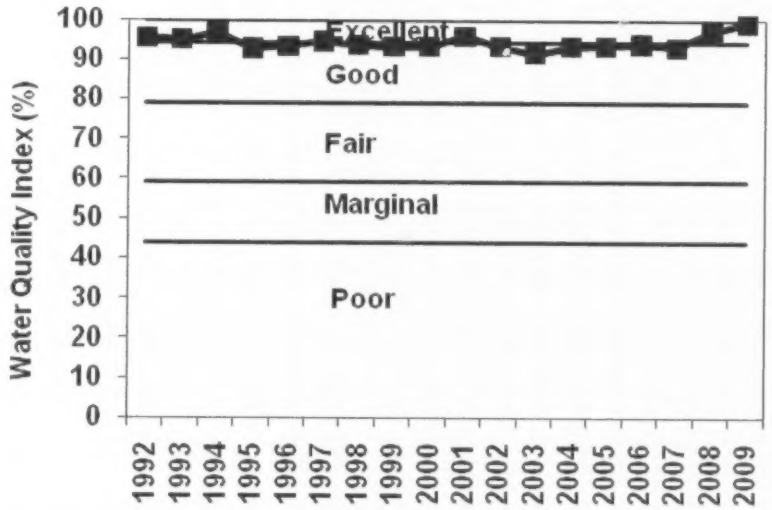
2008
2009



The Water Quality Index compares a number of important water quality parameters against established standards, objectives, or guidelines. When compared over time, it provides a useful indicator of how water quality may be changing. Annual data from 40 to 50 consistently monitored sites are used in the WQI.

The Water Quality Index yields a number between 0 and 100 that is indicative of the overall water quality.

***E*xcellent**: (CCME WQI Value 95-100) - water quality is protected with a virtual absence of threat or impairment; conditions very close to natural or pristine levels. These index values can only be obtained if all measurements are within objectives virtually all of the time.
Good: (CCME WQI Value 80-94) - water quality is protected with only a minor degree of threat or impairment; conditions rarely depart from natural or desirable levels.
Fair: (CCME WQI Value 65-79) - water quality is usually protected but occasionally threatened or impaired; conditions sometimes depart from natural or desirable levels.
Marginal: (CCME WQI Value 45-64) - water quality is frequently threatened or impaired; conditions often depart from natural or desirable levels.
Poor: (CCME WQI Value 0-44) - water quality is almost always threatened or impaired; conditions usually depart from natural or desirable levels.

What is being measured and how?	Why is it important to measure this?	Where are we starting from?	What is the most recent available value for this indicator?	What is the trend over time for this indicator?	Comments/recent actions/report links
The development and effective use of integrated watershed plans and Conservation District (CD) governance. Three individual metrics measure: A. Watershed Management (3) B. Citizen Engagement (3) C. Integrated Watershed Management Planning and Implementation (3)	To understand the progress being made in improving watershed health. Watershed planning is a key strategy to meet: recommendations of the Lake Winnipeg Stewardship Board to reduce nutrients, evaluate drinking water source protection as set out by the *Water Protection Act*, to ensure that environmental information is available for incorporation into the municipal planning process, and to protect valuable water resources and ensure sustainable development into the future for Manitobans.	In 2006 The Water Protection Act was proclaimed, enabling the Provincial designation of Water Planning Authorities, primarily through the Conservation Districts program. Current scores for each watershed are presented in the map below. Conservation Districts offer a mixed suite of programming across municipal Manitoba. As planning progresses, CD programming and budgets will be reflective of plan recommendations.	The maximum score each watershed can achieve individually is 9. There are 30 watersheds in municipal Manitoba, resulting in a maximum total score for all watersheds of 270. This year the total score for all watersheds is 129. Seven plans were completed in 2010/11 and one plan was initiated. In total, ten plans have been completed. There are a further 13 plans in development and 7 more planning areas without a plan initiated.	Excellent and expanding The total score has increased from 123 in 2009-10 to 129 2010-11, an upward trend.	Manitoba Water Stewardship planners are working: with CDs to complete watersheds plans in all 30 municipal watersheds with CDs, to align programming and budgets to plans, and to encourage the voluntary movement towards watershed boundaries and watershed-based management for all watersheds.

Indicator – The development and effective use of integrated watershed management plans and Conservation District governance.

A Watershed Management

A watershed organization exists with policies which coordinate decision making within and between agencies responsible for water management.

0 – no conservation district exists

1 – a municipal-based conservation district exists or exists in only a small part of the watershed

2 – a watershed-based conservation district exists with limited involvement in water management decision making

3 – a watershed-based conservation district exists with policies which coordinate decision making between and within agencies responsible for water management.

B Citizen Engagement

Engagement of local citizens in planning, incentive programming and education.

0 – no conservation district exists

1 – a conservation district exists but offers limited incentive-based and education programming

2 – a conservation district exists and offers incentive-based and education programming broadly

3 – a conservation district exists and offers relevant, targeted incentive-based programming to engaged and educated residents.

C Integrated Watershed Management Planning and Implementation

An integrated watershed management plan is implemented as evidenced through linked budgets, and programming reflective of plan recommendations.

0 – a water planning authority has not completed a management plan

1 – a water planning authority exists with a plan in development stages

2 – a watershed plan is complete but programming does not closely reflect plan recommendations

3 – a watershed plan is complete and programming is reflective of plan recommendations

The Development and Effective Use of Integrated Watershed Management Plans and Conservation District Governance

Legend

Score Metrics

A. Watershed Management
B. Citizen Engagement
C. Integrated Watershed Management Planning and Implementation

Total Score

0-1 NO CD - No CD or only a small portion of the watershed contains a CD

2-4 CAPACITY BUILDING - Programs not tailored to watershed-based management or issues

5-7 LIMITED PROGRAMMING - Plan in development, untargeted or municipal programming

8-9 TARGET - Relevant, targeted CD programming offered in watershed

Watershed Name	Score A	B	C	Watershed Name	Score A	B	C
Alonsa	3	2	1	Morris River	1	0	0
Arrow Oak River	1	2	3	Netley-Grassmere	2	3	1
Birdtail Assiniboine	1	2	3	Pembina River E. & W.	1	3	3
Brokenhead River	0	0	0	Plum River	0	0	0
Carrot River	1	3	1	Rat Marsh River	2	2	1
Central Assiniboine	1	2	1	Roseau River	0	0	0
Cooks-Devils Creek	1	1	1	Seine River	2	2	3
Dauphin Lake	2	2	1	Shell River	1	1	1
East Duck	2	2	1	Sturgeon Creek	1	0	0
East Souris River	1	3	3	Swan Lake	2	2	1
Fisher River	2	2	1	West Interlake	2	1	1
Icelandic River	2	3	3	West Souris	1	2	1
La Salle River	1	2	2	Whitemouth River	0	0	0
Lake Manitoba North	0	0	0	Whitemud River	3	2	1
Little Saskatchewan River	1	2	3	Willow Creek	2	2	1

What is being measured and how?	Why is it important to measure this?	Where are we starting from?	What is the most recent available value for this indicator?	What is the trend over time for this indicator?	Comments/recent actions/report links
Approximately 400 public water supply systems in Manitoba serve over 80% of residents. The remainder of the population is served by semi-public or private water systems or fall within federal jurisdiction, e.g. First Nations. The microbiological compliance index captures public water system compliance with the most critical regulatory requirements associated with microbiological parameters and acute health effects, including: bacteriological testing schedules, bacteriological water quality standards, chlorine	It is important to measure compliance with microbiological and chemical standards to confirm that acute and chronic risks to public health from drinking water consumption are decreasing, and to ensure steps are taken to address any increases. The microbiological compliance index captures more critical acute public health risks associated with disease-causing microbiological organisms. The chemical compliance index captures lower level public health risks, typically associated with lifetime	The Office of Drinking Water's compliance monitoring program was initiated in 2003. That year, a baseline microbiological compliance index was established for bacteriological and chlorine standards and frequency of testing in public water systems. The baseline microbiological compliance index for Manitoba's public water systems was 72%.. The baseline chemical compliance index for Manitoba's public water systems established in 2011 is 66%.	The microbiological compliance index for public water systems in Manitoba was 78% in 2007. The 78% value represents the average compliance of approximately 400 public water systems many of which are small and lack resources to maintain compliance. From a population perspective, >95% of the population serviced by a public water system receive water from a utility that is in compliance >95% of the time.	Between 2003 and 2006, the percentage of compliance improved because of the presence of new drinking water officers in the field providing regulatory and technical service. As anticipated in last year's report, microbiological compliance diminished slightly as officers discovered previously unknown smaller systems that lack the resources to achieve compliance. Trends have not yet been established for chemical compliance.	For more information, see the Office of Drinking Water web site: http://www.gov.mb.ca/waterstewardship/drinking_water/index.html The site contains several technical documents associated with Manitoba's drinking water program. Drinking water safety is protected through the use of construction permits and operating licences for water suppliers, scheduled and non-scheduled inspections of facilities, scheduled water quality monitoring and ongoing education of utility owners/operators and the general public. • Licensing and permitting ensures that minimum engineering and construction standards are met or exceeded. • Inspections ensure that minimum operational performance and water quality standards are met by utilities and, that there is ongoing pubic reporting and accountability. All of the activities focus on the importance of public health protection through the assurance of water supply quality and reliability and maintenance of public confidence.

What is being measured and how?	Why is it important to measure this?	Where are we starting from?	What is the most recent available value for this indicator?	What is the trend over time for this indicator?	Comments/recent actions/report links
residual testing schedules, and chlorine residual standards. These standards came into effect in 2007. New this year, the department will also be reporting on compliance with chemical standards that come into effect on March 1, 2012. These standards are typically based on lifetime exposure and are associated with lower level public health risks.	exposure to chemical parameters.	From a population perspective, >85% of the population serviced by a public water system receive water from a utility that is in compliance with all chemical standards.			

The Public Interest Disclosure (Whistleblower Protection) Act

The Public Interest Disclosure (Whistleblower Protection) Act came into effect in April 2007. This law gives employees a clear process for disclosing concerns about significant and serious matters (wrongdoing) in the Manitoba public service, and strengthens protection from reprisal. The Act builds on protections already in place under other statutes, as well as collective bargaining rights, policies, practices and processes in the Manitoba public service.

Wrongdoing under the Act may be: contravention of federal or provincial legislation; an act of omission that endangers public safety, public health or the environment; gross mismanagement; or, knowingly directing or counselling a person to commit a wrongdoing. The Act is not intended to deal with routine operational or administrative matters.

A disclosure made by an employee in good faith, in accordance with the Act, and with a reasonable belief that wrongdoing has been or is about to be committed is considered to be a disclosure under the Act, whether or not the subject matter constitutes wrongdoing. All disclosures receive careful and thorough review to determine if action is required under the Act, and must be reported in a department's annual report in accordance with Section 18 of the Act.

The following is a summary of disclosures received by Manitoba Water Stewardship for fiscal year 2010/11.

Information Required Annually (per Section 18 of The Act)	**Fiscal Year – 2010 - 2011**
The number of disclosures received and the number acted on and not acted *Subsection 18(2)(a)*	**NIL**
The number of investigations commenced as a result of a disclosure. *Subsection 18(2)(b)*	**NIL**
In the case of an investigation that results in a finding of wrongdoing, a description of the wrongdoing and any recommendations or corrective actions taken in relation to the wrongdoing, or the reasons why no corrective action was taken. *Subsection 18(2)(c)*	**NIL**

STATUTORY RESPONSIBILITIES OF THE
MINISTER OF WATER STEWARDSHIP

The Conservation Agreements Act, C.C.S.M. chapter C173
The Conservation Districts Act, C.C.S.M. chapter C175
The Drinking Water Safety Act, C.C.S.M. chapter D101
The Dyking Authority Act, C.C.S.M. chapter D110
The Fisheries Act, C.C.S.M. chapter F90 [except Part III]
The Fishermen's Assistance and Polluters' Liability Act, C.C.S.M. chapter F100
The Ground Water and Water Well Act, C.C.S.M. chapter G110
The Manitoba Habitat Heritage Act, C.C.S.M. chapter H3
The Lake of the Woods Control Board Act, C.C.S.M. chapter L30
The Manitoba Natural Resources Transfer Act (as it relates to water and fisheries), C.C.S.M. chapter N30
The Natural Resources Agreement Act, 1938, C.C.S.M. chapter N40
An Act to ratify a certain Agreement between the Government of the Dominion of Canada and the Government of the Province of Manitoba, C.C.S.M. chapter N50
The Phosphorus Reduction Act (Water Protection Act Amended), SM 2008, chapter W65
The Red River Floodway Act, C.C.S.M. chapter R2
The Shellmouth Dam and Other Water Control Works Management and Compensation Act (Water Resources Administration Act Amended), SM 2008, chapter W70
The Water Power Act, C.C.S.M. chapter W60
The Water Protection Act, C.C.S.M. chapter W65
The Water Resources Administration Act, C.C.S.M. chapter W70

- Sections 16, 17 and 18
- All other sections of the Act insofar as they related to the planning and direction of water control works, but excluding the construction and maintenance of water control works

The Water Resources Conservation Act, C.C.S.M. chapter W72
The Water Rights Act, C.C.S.M. chapter W80
The Water Supply Commissions Act, C.C.S.M. chapter W100

and:

Manitoba Fishery Regulations (under section 43 of the *Fisheries Act* (Canada))

As per Schedule "S", Order-In-Council 350/2009